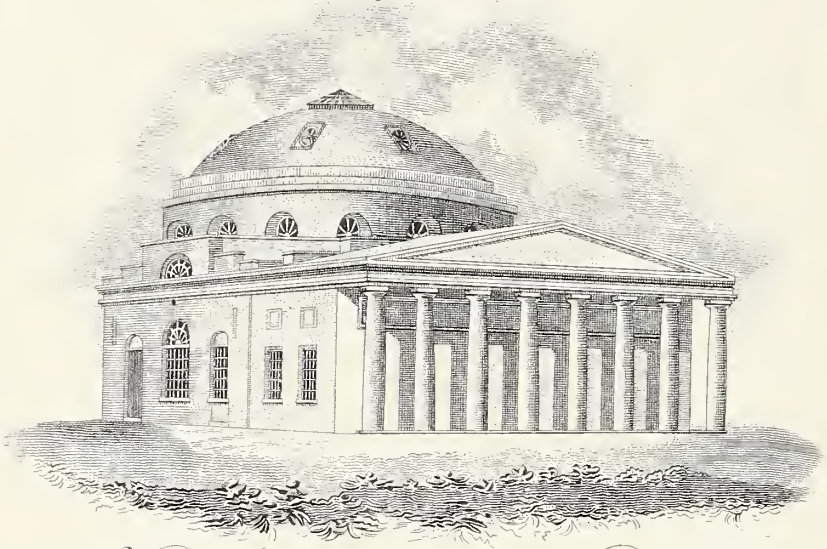
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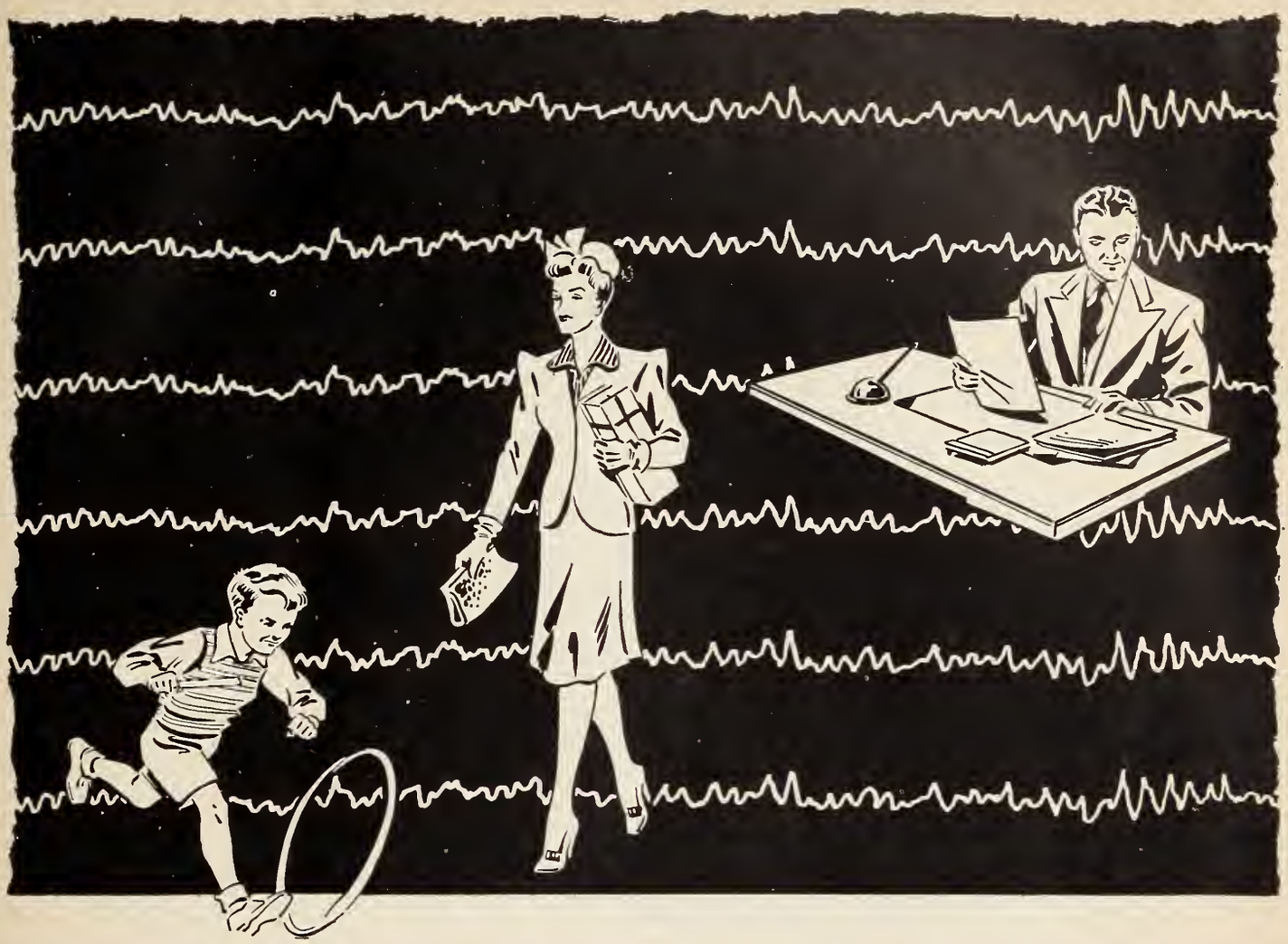
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The Moving Finger Writes

OF MORE NORMAL, HAPPIER PEOPLE

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KAPSEALS

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A product of modern research offered to the medical profession

1. Palmer, H. D. & Hughes, J.: *The Penn. Med. J.*, Aug. 1942

War Bulletins

Paul V. McNutt Replies

Dear Doctor Foster:

This will acknowledge receipt of the letter dated November 11 signed by you, Dr. P. L. Ledwidge, Dr. V. M. Moore, as the Committee of the Council, concerning the potentially serious situation among the medical profession of Michigan. I understand from the Procurement and Assignment Service that Michigan, as you have stated, has filled its quota for the time being and that the Recruiting Boards are not functioning in your State at the present time.

The State Chairman for the Procurement and Assignment Service has been informed that no further recruiting is to continue, and that the Army and Navy have agreed that they will not remove physicians from a State until they have been cleared by the Procurement and Assignment Committee. It therefore devolves upon the State Chairman and his Committee to see that, for the time being at least, there is no further depletion of physicians.

The Army and the Navy have agreed that in the event an occasional physician is needed for some particular work, the P. and A. Service may use its judgment in releasing such a physician for military duty.

I hope this will explain the situation, and if there is further depletion I would appreciate your letting me know because the State P. and A. Service should be watching the civilian medical care problem very carefully at this time, particularly in view of the fact that Michigan is a large industrial area and is contributing greatly to the war effort.

With kind regards, I am

Sincerely yours,
PAUL V. MCNUTT, *Chairman*
War Manpower Commission,
Washington, D. C.

November 19, 1942

Percentages of Medical Enlistments To 1942 Quota

Alabama, 204; Arizona, 156; Arkansas, 122; California, 81; Colorado, 124; Connecticut, 76; Delaware, 152; District of Columbia, 78; Florida, 118; Georgia, 149; Idaho, 162; Illinois, 82; Indiana, 136; Iowa, 116; Kansas, 114; Kentucky, 168; Louisiana, 214; Maine, 128; Maryland, 109; Massachusetts, 78; Michigan, 126; Minnesota, 98; Mississippi, 161; Missouri, 104; Montana, 122; Nebraska, 91; Nevada, 65; New Hampshire, 85; New Jersey, 107; New Mexico, 224; New York, 78; North Carolina, 163; North Dakota, 114; Ohio, 115; Oklahoma, 132; Oregon, 113; Pennsylvania, 93; Rhode Island, 92; South Carolina, 174; South Dakota, 137; Tennessee, 166; Texas, 147; Utah, 111; Vermont, 96; Virginia, 138; Washington, 126; West Virginia, 153; Wisconsin, 85; Wyoming, 158. These figures are as of October 31, 1942.

Memorandum (M-273 Revised)

To: All Local Boards and Appeal Boards

Subject: Classification of Doctors of Medicine and Dentistry.

1. Because of their professional capacities and because their occupations are classed as critical, the classification of Doctors of Medicine and Dentistry should be considered carefully.

2. The advice of the Procurement & Assignment Service should be obtained before consideration of classification as explained in Local Board Release No. 89, as amended April 28, 1942. The advice of the Procurement and Assignment Service should be followed closely. If, in the opinion of the Board, the Procurement and Assignment advice is contrary to their judgment, the cover sheet, together with pertinent data concerning the disagreement, should be forwarded to State Headquarters for review.

3. The dependency consideration with regard to family relationship is not different from all other registrants as provided in Local Board Release No. 123, as amended.

4. Doctors of Medicine and Dentistry should be advised about 60 days in advance when their classification is to be reopened and advised to take immediate action in the obtaining of a commission in the armed forces. If they take this action, sufficient time (usually about 90 days) should be given. Proper proof should be furnished your board of the action taken and of the progress of the same. If after advance warning, the registrant fails to take proper action, the usual processing for induction should be followed.

5. This memorandum supersedes and replaces Memorandum (M-273), dated May 8, 1942, and supplements Local Board Release No. 89, as amended April 20, 1942.

6. It must be remembered that a Local Board is disqualified from classifying one of its own examining physicians. (See paragraph 603.55(b) of the Regulations).

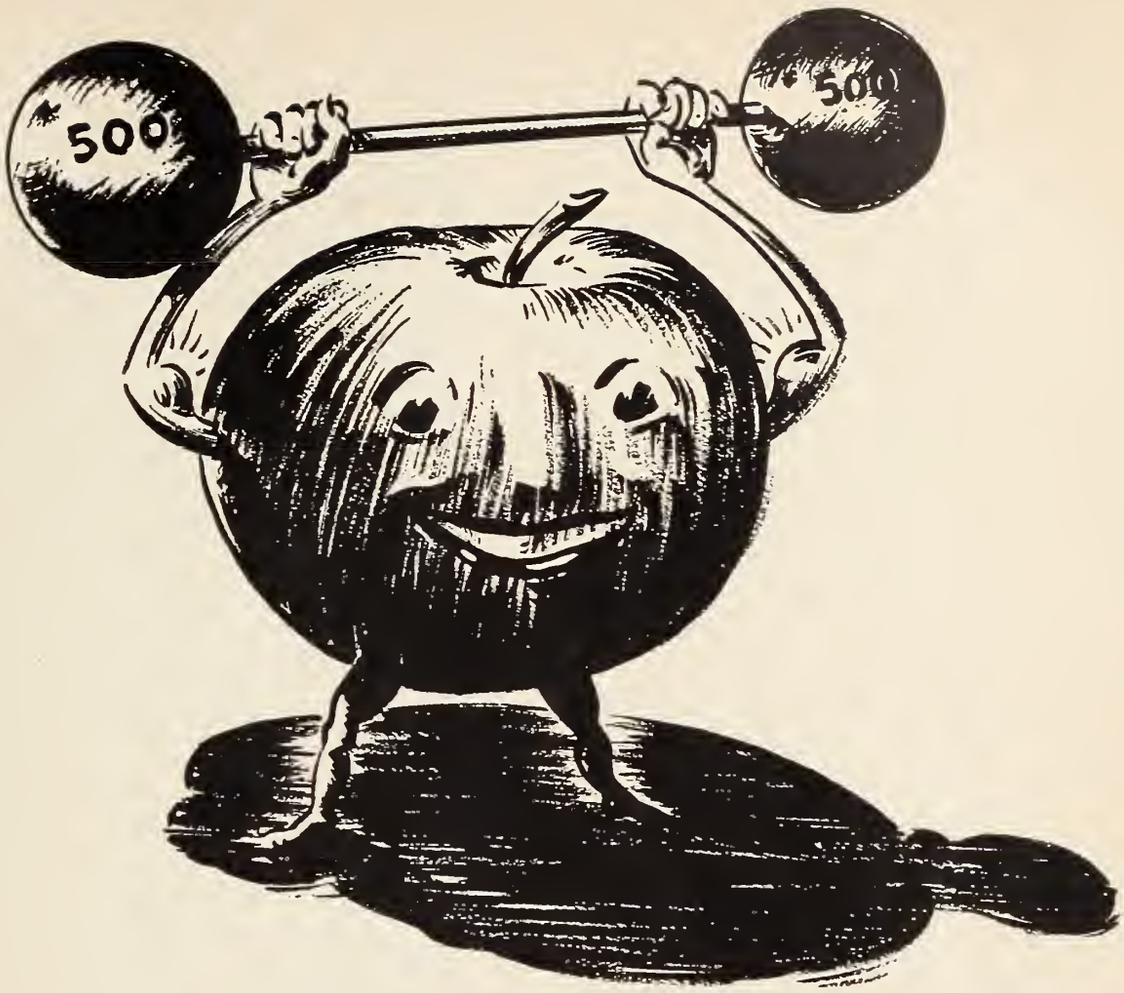
E. M. ROSECRANS, *State Director,*
State Selective Service,
Lansing, Michigan

November 12, 1942

The value of skin testing has been over-emphasized in recent years. Two important facts are frequently overlooked:

1. Skin reactions should always be correlated with the clinical history. A carefully taken history requires at least average intelligence and coöperation on the part of the patient, and diligence plus infinite patience on the physician's part.

2. Skin tests for foods are notoriously unreliable. Here the use of elimination diets and basic diets which include only a few foods, usually considered nonallergic, are of value.—S. M. JACOBSON, *W. Va. Med. Jour.,* Oct. 1942.



AT YOUR SERVICE, DOCTOR!

Big, juicy Michigan apples are all set to come to the aid of the party . . . and do their bit in maintaining health in times when food values are being watched more carefully than ever.

According to the best reports, apples are packed with health-giving vitamins A, B and C, as well as much needed minerals . . . calcium, phosphorus, iron, magnesium . . . and are a valuable source of fruit sugars. Because of their content of pectin and hemicellulose, colloidal substances, they also act as a corrective to both constipation and diarrhea.

Apples are one of the fruits recommended by the Department of Agriculture . . . easy to eat, easy to digest, and easily served in many delightful ways, both raw and cooked.

Nature Smiles on **MICHIGAN** *Apples*

FOR HEALTH . . . FLAVOR . . . JUICE

Michigan Medical Service

A study by Michigan Medical Service reveals that only 55 per cent of services for Michigan Medical Service subscribers were reported within the first month following the month of service. The remaining 45 per cent were reported anywhere from two months to two years late. This means not only that the doctor has been late in being paid, but also that Michigan Medical Service has experienced needless administrative expense. The doctor is urged to send in his Monthly Service Report as soon as possible after the surgery has been performed. This is a protection both for himself and for Michigan Medical Service, for reports received after ninety days from the month of service may not be authorized for payment by the Medical Advisory Board.

To speed up the handling of claims, as well as to conserve the doctor's time in filling out reports, the use of the Initial Service Report is being discontinued. In the future, it will be necessary to complete only the Monthly Service Report when reporting services rendered to subscribers. This action will be of little avail, however, without the doctor's coöperation in promptly reporting services which he has rendered.

Michigan Medical Service's books for the year of 1942 must be closed in January, 1943, in order to prepare the Annual Statement for the Department of Insurance. Physicians are requested to report all unreported services rendered in 1942 by the end of this month. Michigan Medical Service will not be able to make an accurate statement unless all cases for 1942 are reported by this time.

In the spring of 1941 benefits for anesthesia, when rendered by a doctor of medicine, were added to the Surgical Benefit Certificate. It was felt that this would not only be an additional benefit to the subscriber but would also encourage the growth in the field of anesthesia as a specialty of the practice of medicine. Statistics are now available to uphold this contention. During the first few months after this benefit was added, anesthesia was rendered by a doctor of medicine in only 2 per cent of the surgical cases reported on Michigan Medical Service subscribers. In the spring of 1942 this figure had risen to 4 per cent. At the present time, doctors of medicine are administering the anesthetic in 8 per cent of the cases reported on Michigan Medical Service subscribers. Periodic studies are being made to determine whether this geometric increase is continuing. The opinion has been voiced that perhaps this increase is due to the fact that so many nurse anesthetists have been accepted in the armed services. However, the fact that a much larger proportion of the doctors have been inducted in the services seems to obviate this conclusion.

Michigan Medical Service has paid to doctors for services to subscribers:

1940 (10 mos.)	**$ 172,115.00**
1941	**790,733.30**
1942 (11 mos.)	**2,104,132.92**
Total	**$3,066,981.22**
November 1942	**226,841.60**

BED REST IN CORONARY THROMBOSIS

The term bed rest throughout this paper is used to mean complete rest in bed without bathroom privileges, and with the top half of the mattress elevated to an angle of from 30 to 40 degrees twenty-four hours each day. It has been my experience that the patient who is allowed bathroom privileges, frequently cannot understand why, if he is allowed to walk to the bathroom, he cannot also be allowed to sit in a chair and rest awhile out of bed at that time; or at some time early in the course of his illness he becomes restless and wishes to get out of bed more often and for longer periods of time. Doing so, of course, endangers his life. It has also been my observation that patients who are allowed bathroom privileges suffer more with cardiac or referred pain.

Most patients confronted with this condition are depressed by the thought that they have reached the end of all of life's activities; so happy are they who, at the proper moment, are impressed with the thought that if they remain in bed for three months, with a slow gradual return to activity thereafter, they can plan on a continued active life. They look forward to a return to work or play instead of a neurotic life in constant dread of continued cardiac pains or subsequent attacks of cardiac disease. This first attitude is possibly well exemplified by the case of the physician who retires and lives a life of fear, possibly because he has not submitted to sufficient bed rest to allow nature to complete its repair process. It is, therefore, my opinion that a minimum of three months' bed rest in all cases of coronary thrombosis should be established, for there is no adequate way at present, of determining that even the apparently minor cases of coronary thrombosis are not potentially deadly if the patient is allowed early freedom from bed rest.

Data have been presented to show that the healing process of coronary infarction is not complete in one or two months, the usual period of bed rest advised.

In view of this conclusion and in the absence of infallibility in determining the severity of the infarction, a minimum of three months' bed rest is recommended for the patient in all cases of coronary thrombosis. James A. Bradley, M.D., Sept. 1942 *Jour. Fl. Med. Assn.*

WARTIME BOOM IN BABIES



Photograph Camp prenatal support (skeleton indrawn)



Today, more babies are on the way than in any time during the last 20 years! Naturally, there is a corresponding rise in the need and demand for prenatal supports.

The S. H. Camp and Company has developed over a period of more than 30 years—*a complete series* of maternity supports . . . each type scientifically designed and constructed . . . each type giving accurate support to the abdomen, pelvic girdle and spinal column.

In fact, not a single detail which will add to their clinical value has been neglected.

That these garments successfully measure up to the most stringent clinical requirements is evident—since they carry the approval of many leading gynecologists and obstetricians throughout the world.

The Camp series of prenatal supports comprise models suitable for all types of build. Patients are asked to return each month for adjustment of their prenatal supports. This service is given free of charge by all Camp-trained fitters.

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The Sawyer Sanatorium offers facilities for the treatment of patients suffering from Nervous Diseases, Mental Disorders, Psychoneuroses, including Involutional Psychoses; Arterio-Sclerotic, Senile and Adolescent Mental Disorders; Paralyses; Cardiac, Cardio-renal and Hypertensive Nervous Conditions; and the various manifestations associated with them.

Housebook giving details, pictures and rates will be sent upon request.

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SAWYER SANATORIUM

White Oaks Farm
Marion, Ohio

COUNTY MEDICAL SOCIETY MEETINGS

Bay—November 25, 1942—Regular Meeting.

Berrien—December 2, 1942—Annual Meeting.

Calhoun—December 1, 1942—Hart Hotel. Speaker: Rev. Carleton Brooks Miller.

Dickinson-Iron—December 2, 1942—Annual Meeting.

Genesee—November 10, 1942—Elks Club. Regular Meeting. December 9, 1942—Elks Club. Past Presidents' Dinner. December 22, 1942—Elks Club. Speaker: Claire L. Strath, M.D. Subject: "Treatment of Facial and Scalp Wounds and Crushing Injuries."

Hillsdale—December 8, 1942—Speaker: Mary P. Billmeyer, Orthopedic Consultant of State. Subject: "Demonstration of Kenny Treatment."

Kalamazoo—December 15, 1942—Election of Officers.

Oakland—December 2, 1942—Kingsley Inn—Annual Business Meeting.

St. Clair—December 8, 1942—Port Huron—Speaker: Dr. Jennings, of Jennings Hospital in Detroit. Subject: "Acute Respiratory Infection."

Washtenaw—December 8, 1942—Michigan Union—Speaker: J. Matthew Farris, M.D. Subject: "The Indications for Plasma Transfusions."

Wayne—December 14, 1942—Art Institute—Speaker: J. Harry Ebbs, M.D. Subject: "Nutrition in Everyday Practice."

COUNCIL AND COMMITTEE MEETINGS

September 9, 1942—Medical Preparedness Committee—Statler Hotel, Detroit.

September 21, 1942—The Council—Pantlind Hotel, Grand Rapids.

September 24, 1942—The Council—Pantlind Hotel, Grand Rapids.

October 21, 1942—Executive Committee of The Council—Statler Hotel, Detroit.

November 7, 1942—Industrial Health Committee—Statler Hotel, Detroit.

November 8, 1942—Syphilis Control Committee—Olds Hotel, Lansing.

November 18, 1942—Executive Committee of The Council—Statler Hotel, Detroit.

November 19, 1942—Maternal Health Committee—Statler Hotel, Detroit.

November 29, 1942—Committee on Scientific Work—Statler Hotel, Detroit.

December 2, 1942—Postgraduate Medical Education Committee—Statler Hotel, Detroit

December 13, 1942—Tuberculosis Control Committee—Olds Hotel, Lansing.

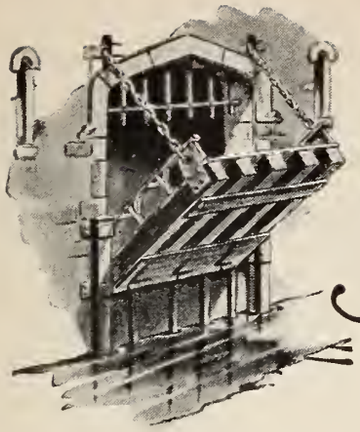
December 13, 1942—Medical Preparedness Committee—Statler Hotel, Detroit.

December 17, 1942—Executive Committee of The Council—Statler Hotel, Detroit.

December 18, 1942—Cancer Control Committee—Women's League, Ann Arbor.

December 20, 1942—Syphilis Control Committee—Olds Hotel, Lansing.

Say you saw it in the Journal of the Michigan State Medical Society



Safeguarding

YOUR USE OF

BENZEDRINE SULFATE TABLETS

Any potent drug should be administered under medical supervision, and Benzedrine Sulfate* is no exception.

In medical literature, the majority of the reports of undesirable reactions attributed to Benzedrine Sulfate have been traceable to cases of indiscriminate or unsupervised use. This is equally true of the often magnified and sensational reports in the lay press.

Obviously, these unfavorable reports greatly retarded the wider clinical use of this valuable therapeutic agent. From the very beginning, Smith, Kline & French Laboratories—as a matter of business judgment, to say nothing of ethical considerations—did what it could to keep Benzedrine Sulfate solely in the hands of the medical profession.

But our own unaided efforts never met with complete success. And, understandably concerned over the possibility of self-medication, certain physicians hesitated to employ Benzedrine Sulfate therapy.

However, when the Federal Food, Drug & Cosmetic Act of June, 1938, became effective, we immediately put Benzedrine Sulfate in the category of drugs to be sold on prescription only. The Act is strictly enforced and is supplemented by similar legislation in many states. Today, as a result, the physician can prescribe Benzedrine Sulfate, secure in the knowledge that there is little likelihood of its abuse.

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is economical because solutions may be dispensed at low cost. Stock solutions keep indefinitely.

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Literature furnished on request

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BALTIMORE, MARYLAND

Reading Notices

CIBA AWARDED MINUTE MAN FLAG

In recognition of more than 95 per cent participation in the federal payroll savings plan, a Minute Man flag has been presented to the Ciba Pharmaceutical Company of Summit, N. J., by the United States Treasury Department War Savings Staff.

The presentation was made by W. H. Hassinger, Deputy Administrator of the War Savings Staff, and a speech of acceptance was delivered by J. J. Brodbeck, executive vice president and general manager of Ciba.

DEXTRI-MALTOSE WITH YEAST EXTRACT AND IRON—NEW PRODUCT

This product supplies vitamin B complex and ferrous sulphate in important amounts, as well as carbohydrate, in the infant's milk formula. It represents a considerable advance over previous similar Mead Johnson products, as follows:

1. There are now four tablespoonfuls to the ounce instead of six;
2. The patient now receives 16 ounces per can instead of 12, without increase in retail price.

For further information, please write to Mead Johnson & Company, Evansville, Indiana.

WILLIAM T. ANDERSON IN SERVICE

William T. Anderson, Jr., M.D., for nearly twenty years director of the radiation research laboratory of the Hanovia Chemical and Manufacturing Company, Newark, N. J., has been granted a leave of absence to accept a commission as a Lieutenant in the Naval Reserve, Dr. Charles Engelhard, president, has announced.

In making the announcement, Dr. Engelhard, a pioneer in the field of ultra-violet and infra-red therapy since 1906, paid tribute to Lt. Anderson and revealed for the first time that the latter's recent inventions and researches were benefiting all branches of the armed forces as well as civilians.

"Newest developments made in mercury arc lamps by Lt. Anderson, chiefly in the structure of the electrode, have resulted in the saving of 98 per cent of highly critical mercury while at the same time improving the product," Dr. Engelhard said. "His research just completed has definitely proved that the activated electronic electrode is better than the nonactivated type in mercury arc lamps."

MALE HYPOGONADISM

An interesting report on male hypogonadism (eunuchoidism), in which the patient happens to be an anonymous 32-year-old physician, was presented by J. P. Pratt, M.D., of the Henry Ford Hospital, in the *Journal of Clinical Endocrinology* (Vol. 2; No. 7, 1942). The patient, obviously in an advantageous position to view the state of his own progress, received methyl testosterone (orally effective male sex hormone, Oreton) for a period of approximately one year. Although a lack of sexual interest and ability was evident in the patient, Dr. Pratt indicates that the distinct social handicaps of effeminate appearance and high-pitched voice were of much deeper concern prior to therapy. Thus, the patient "felt embarrassed in the presence of strangers because of his high-pitched voice, lack of beard, unmasculine contour and youthful appearance. No doubt the patient was unduly sensitive regarding these points, but long years of being called 'Madame' over the telephone had sensitized him."

Although objective results of therapy were found most encouraging, including as they did, marked increase in size of penis (three-fold), active libido, pubic hair development and more heavily pigmented skin, Dr. Pratt reports that the "fairly marked lowering of the vocal pitch . . . is the most gratifying to the patient of all the responses. He no longer is subject to telephone difficulties."

In reporting that the therapeutic effects of the oral form (methyl testosterone), when used in proper dosage, are as great as those achieved by injection or pellet implantation, Dr. Pratt concludes that "oral therapy appears to be the choice in adult hypogonadism."

WINTHROP CHEMICAL COMPANY MERGES WITH ALBA PHARMACEUTICAL COMPANY

Winthrop Chemical Company, Inc. absorbed Alba Pharmaceutical Company, Inc., on January 6, 1943, and has taken over Alba's assets, property, trademarks and good will.

"Although Alba ceases to exist," Mr. Hill said, "its research and manufacturing facilities in Rensselaer, N. Y., have been consolidated with those of Winthrop. Its marketing policies remain undisturbed." Dr. J. Mark Hiebert, medical director of Alba, becomes assistant to Dr. Theodore G. Klumpp, Winthrop president, devoting himself largely to that company's expanding program of medical research. Other Alba personnel will be absorbed by the surviving company.

"During the past year, Winthrop has broadened its research program," Mr. Hill said, "and the merger will permit of even further expansion in that direction. Winthrop is perhaps best known for its research in and production of Atabrine, a synthetic substitute for quinine in the treatment of malaria. It also produces many other drugs for the Armed Forces."

As a result of the merger, Fairchild Brothers and Foster, a wholly-owned subsidiary of Alba, has become a wholly-owned subsidiary of Winthrop.

Alba Pharmaceutical Company was incorporated in New York on August 30, 1935.

The JOURNAL
of the Michigan State Medical Society
Issued Monthly Under the Direction of the Council
Volume 42 January, 1943 Number 1

The Preventive Aspects of Maternal Mortality*

By Philip F. Williams, M.D.
Philadelphia, Pennsylvania



Philip F. Williams

M.D., School of Medicine, University of Pennsylvania, 1909. Professor of Clinical Obstetrics and Gynecology, University of Pennsylvania; Gynecologist and Obstetrician, Philadelphia General Hospital and Jewish Hospital; Obstetrician, Presbyterian Hospital.

An outstanding feature of practically all studies on maternal mortality is the high proportion of deaths regarded as avoidable. Responsibility for controlling such deaths has been assigned to patient, physician and the community. In the Philadelphia study, continuous since 1931, seven factors have been used in *the final analysis of the cases* AVQ *Lack of prenatal* care; (2) negligence of patient or her friends; (3) induction of abortion; (4) error in judgment; (5) error in technique; (6) intercurrent disease; (7) unavoidable disaster.

Each factor will be discussed from the standpoint of controllability.

■ The wave of interest in maternal welfare which has swept across this country in recent years has stimulated many types of activity in the subject.

A few of these are the aspects covered by the section on Maternal and Child Health, of the Social Security Act, administered by the Children's Bureau and the underlying Bureaus in the State Departments of Health, the splendid constructive work on education of the laity by the Maternity Center Association. The formation of the American Committee on Maternal Welfare, representing some thirty professional and allied societies with their production of the motion picture film, "Birth of a Baby," and their organization of the two Congresses on Obstetrics and Gynecology. The setting up of the National Council of Mothers and Babies has stimulated and directed work on maternal and infant welfare by some sixty lay groups with a nationwide scope of membership.

Finally, and largely responsible for the remarkable decrease in the maternal mortality rates of our cities and states, has been the formation and the active interest of local maternal welfare committees and commissions. While the extent and method of the studies and surveys of such groups have varied widely the end results have been beneficial by promoting better obstetric standards and practices. Probably the most popular type of study has been the investigation of the maternal deaths in an individual community. The original survey of this nature was suggested by the Obstetric Advisory Committee of the Children's Bureau, and was carried out by the Bureau, the report appearing under the title, "Maternal Mortality in Fifteen States." In this report occurs a statement by the Advisory Committee that the high mortality during delivery and the postpartum period is largely due to controllable causes. In many of the chapter conclusions reference is made to the preventability of such deaths.

The report, in 1933, of the Committee on Public Health Relations of the New York Academy of Medicine, "Maternal Mortality in New York City, a Three-Year Study," first expressed statistically the preventability of a large group of maternal deaths. They regarded 65.8 per cent of 2,041 deaths in New York as being preventable, if the best possible skill of the community had been available. This remarkably high figure was the

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occasion of much discussion. The criteria upon which this finding was based were clearly stated and not at all unreasonable. The following year, 1934, a Committee of the Philadelphia County Medical Society, in Three-Year Study Report, modified the basic criteria so far as the physician was concerned to a reasonable degree of skill and learning and the use of reasonable care and diligence in the exercise of that skill and the application of that learning. Preventability was regarded present in 56.7 per cent of all deaths studied.

The responsibility for maternal deaths, and the general status of obstetric practice and maternal welfare must be regarded as resting primarily with the medical profession. In a different sense the patient is often responsible, in the same sense one might blame the community or the board of trustees of a hospital. Among the latter groups there is little or no knowledge of the basic principles of maternal welfare. Their education in such matters and to a degree deemed advisable rests upon physicians. This education, however, has to be based upon a thorough realization of the problems of an individual community, and the deficiencies of its maternal care.

A survey of maternal deaths shows up the worst results and the poorest obstetric practice. It points out most strikingly those errors of omission and comission which should be rectified. A simple recital of a number of such examples is shocking at first hearing, but probably will be forgotten unless repeated.

In order to continue exposing the substandard practices and reiterate the manner in which they might be corrected, with extension of such education to the public in the proper manner the Philadelphia Committee continued its original survey as an open monthly forum since the summer of 1933. It has felt necessary to denote the controllability of maternal deaths in order to focus sharply the attention of the ever-changing audience to the most evident element of such control. To this end we have used seven factors in the final coding of the discussion of preventability and responsibility.

Prenatal Care

The first of these factors is lack of prenatal care. By this is meant not only quantity but also the quality. Entire lack of any supervision during pregnancy remains a fault of obstetric practice in large groups by reason of ignorance or poverty or location. It is little wonder then that dire obstetric emergencies are constantly admitted to our maternities. Inadequate supervision often tends to the same situations. Adequate routine visits with blood pressure readings, urine examinations and weight estimations, and physical examinations does much to prevent complications of pregnancy. To such routine care, however, must be added sufficient study of the patient to forewarn one of the possible complications of labor, and to prepare for their correct management.

A pregnant woman then needs to be instructed in the proper care of her health during pregnancy and specifically of such items as intercourse as well as the proper preparation of her home if she is to be delivered there. Such care is informative but it must be supplemented, as Bingham advises, with preventive care in which the patient is told what measures she can take to avoid certain complications as toxemia, anemia, and overweight. The patient must be informed of the earliest symptoms which point to danger, and instructed to report them promptly.

A pregnant woman's medical attendant must know what constitutes preventive care study and education of his patient, and apply it constantly to each woman under his supervision.

A dozen cases where lack of prenatal care was ascribed as the avoidable factor were pulled at random from the files. Two hyperemesis cases gave a history of no care until referred to hospital in extremis. Another such case treated successfully in a hospital and discharged at the second month was not seen again until she appeared three months after a long relapse. She was unable to regain sufficient strength to permit termination of the pregnancy and died. The next few charts showed a history of no prenatal care and progressive toxemia in the later months culminating in convulsive type of toxemia, recovery from which could not be attained. One example of lack of prenatal care which was repeatedly seen during the years of our study consisted in faulty estimation of the physician of the severity and advance of toxemia in a woman cared for at home. This type of fault led to the widespread adaptation of a rule in the prenatal clinics of our hospitals that all pregnant women should be admitted for observation and study who presented a blood pressure of 130 or 90, or who showed a rise of twenty points in either reading from the previous estimation, or who showed objective or

subjective symptoms of toxemia. This rule worked all right for a time. Then some cases were noted where such admission and study had been carried out, the patient improved and discharged. The next appearance was re-admission by ambulance or patrol in convulsive toxemia. The clinic routine was then amended that all patients once admitted for toxemia, should, if discharged before delivery, be seen at least weekly in clinic or in their homes. This insistance on constant oversight of toxemia cases has been effective in reducing the number of such histories in recent years.

A lack of prenatal care was seen in such other cases, as a nonseptic abortion whose persistent bleeding led to a fatal anemia; in another case this factor was regarded as present through the nonrecognition of the physician of the symptoms, abdominal pain and progressive shock, of ruptured tubal pregnancy. There was noted the disregard, of patient in one instance and physician in another, of the significance of painless hemorrhage in placenta previa. The lack of personal hygiene and the lack of home hygiene and unclean delivery surroundings were pointed out clearly in deaths from sepsis. The nonrecognition of physical factors leading to obstructed labor, with various types of fatal endings, resulted from neglect on the part of patient in not seeking care or from inadequate examination on the part of the physician.

Negligence

The second avoidable factor, negligence of the patient or her friends, has been used to include various reasons for placing the responsibility for a maternal death upon the patient or her family.

Negligence and ignorance frequently cause a patient to assume responsibility of complications occurring during pregnancy without reporting to her physician or to a clinic; particularly has this been true regarding medical complications. The same reasons have caused patients to refuse to accept hospital care when advised to do so by a physician. Again the refusal of a patient or her family to permit interruption of pregnancy in toxic vomiting or known grave renal or cardiac lesions has been ascribed to this factor of negligence.

A review of a group of maternal deaths will show how serious a problem this is. In our first published Philadelphia report, we felt that two of every three preventable deaths for which responsibility was placed on the patient were caused by lack of coöperation due to ignorance and negligence. Typical examples in a random sampling show a multipara, para 8, refusing hospitalization for the hemorrhage of an abruptio-placenta. An eight-hour delay in admission, in spite of emergency transfusion, caused death before any method of delivery could be attempted.

Another patient signed the release book during treatment for hyperemesis. Her death occurred eight days later on emergency admission to a second hospital. Two cases of refusal of suggested therapeutic abortion for intractible vomiting were followed by exitus. Again, a woman with rising blood pressure and edema persisted on continuing employment until eclampsia developed.

A case of sepsis. Normal delivery in one hospital, discharged on twelfth day. Immediate resumption of marital relations. Admitted with sepsis, generalized peritonitis, one week later in a second hospital. Treatment of no avail.

Postpartum hemorrhage in negro multipara following unattended home delivery of twins. Medical assistance was not sought until after fatal anemia had developed.

Ruptured ectopic gestation. Abdominal pain and vaginal bleeding were present for ten days before a physician was called. Transfusion and operation soon after admission followed by death from anemia and shock. And so the story goes on and on of avoidable factors which widespread education of the public in the elemental principles of maternity hygiene and significance of the earliest danger signals could largely eradicate.

Abortion

The induction of illegal abortion whether by the patient or an agent procured by her has been regarded as an avoidable factor in puerperal deaths. In such instances the death has been regarded as preventable and the patient regarded as responsible.

There are, no doubt, certain spontaneous abortions which become septic, either from poor personal hygiene, neglect or entrance of infection during operative treatment. They form a small percentage of infected abortions. The consensus of opinion among the group which analyzes the maternal deaths in Philadelphia is that the treatment of the illegally induced septic abortion is a

medical problem and that intra-uterine interference is indicated only for life-threatening hemorrhage. Where surgery is practiced, except to promote drainage by removing tissue from the cervix, or to evacuate pelvic collections, and potential or active intra-uterine infection is spread with fatal termination, the responsibility for the death is usually assigned to the physicians.

Criminal abortion has been practiced since time immemorial. Sociologists, economists, physicians and the legal profession have fully discussed this problem. Two solutions present themselves: one, the education of the public by every possible means of the dangers inherent in illegally induced abortion; the other an equally widespread dissemination of education regarding planned parenthood.

Error in Judgment

Errors in judgment have been regarded as an avoidable factor in many cases. In the first series of cases studied in Philadelphia, two thirds of the preventable deaths ascribed to physicians came under this category. It is not an easy matter to assign this avoidable factor. In each instance the decision reflects upon the competence and reasoning of the attendant. It is easier to sit in arm-chair judgment on a maternal death than it might be to face some difficult obstetric situation. Hindsight is more facile than foresight. Kerr has well expressed this situation when he states:

"Obstetric surgery is in marked contrast to general surgery. In the latter, when operation is deemed necessary, the procedure is well defined; only occasionally has the surgeon any difficulty in deciding between alternative procedures. Technical skill is all-important. In obstetric surgery, on the other hand, judgment in the choice of procedure and in the time to interfere may make all the difference as regards success or failure. This can only be learned by long experience, accurate observation and constant practice."

Today, competence in obstetric judgment is available by graduate training. However, the opportunities afforded by residencies are few in number when compared with the widespread need for adequately trained men. Probably, we have not made the greatest use of the material which is available. Personally, I do not feel that refresher courses can do much toward elevating the level of obstetric judgment. If such courses can bring to a man a realization of his own obstetric limitations and an ability to recognize what is not normal early in pregnancy or in labor, they have accomplished much.

The avoidable factor, error in judgment, was operable in a series of cases of ectopic gestation through faulty diagnosis, delay in operating, too much operating in some cases, as in incidental appendectomy in a blood-filled abdomen, correction of other pelvic pathology, or the omission of transfusion as a supportive measure. This factor was applied to cases of placenta previa where the choice of means to control hemorrhage, as vaginal packing, was questionable, or where induction of labor was instituted in the hope of a vaginal delivery, or where the uterus was not packed after delivery or blood transfusions not used. The last two omissions were frequent errors of judgment in deaths from premature separation of the placenta and postpartum hemorrhage.

Where death resulted from septic infection the time and type of interference most frequently formed the basis for assigning the factor error in judgment. Failure to realize the significance of objective symptoms of toxemia, failure of hospitalization of such patients, abrupt surgical treatment of convulsive toxemias on admission, were among the errors of judgment in this cause of death.

Error in judgment was regarded as a principle factor in several cases where rupture of the uterus occurred in a pregnancy following cesarean section where the woman was allowed to go to term with rupture occurring in labor. The patient with a previous cesarean who is allowed to deliver vaginally in a succeeding pregnancy must necessarily be a very well selected case.

The choice of anesthesia has frequently been included in this classification of preventability. Thus the use of chloroform for the delivery of an eclamptic was looked on with disfavor, as was also the use of nitrous oxide oxygen for prolonged anesthesia in vaginal deliveries. The use of spinal anesthesia is not frequent in obstetric practice in Philadelphia and has been regarded as ill chosen if death occurred during its use.

Errors in Technique

The improper management of the third stage of labor resulting in inversion of the uterus in several instances was regarded as error in judgment.

An extreme degree of multiplicity of operative maneuvers to deliver a patient who might have been regarded originally as a subject for elective cesarean section was classified as an error in judgment. One case might well have been included in yesterday's remarks on prolonged labor in contracted pelves. This was reported early in the study. After a fifty-five-hour labor in a woman with a pelvic inlet contraction, the cervix was manually dilated and forceps applied. When delivery failed, axis traction forceps were tried, then version was attempted. A consultant repeated the same procedures also unsuccessfully and then resorted to craniotomy. As it was impossible to deliver the body a classical cesarean section was performed. The patient died shortly of shock.

The inclusion of error in technique as an avoidable factor as distinguished from error in judgment was done to classify specifically a certain small group of cases. If we regard error in judgment as a choice of the wrong manner or method in caring for any particular situation we may regard error in technique as the performance of a presumably correctly chosen method or operation in the wrong way or in such a manner that the patient subsequently died. Probably the largest group of such examples occurred in the deaths from puerperal sepsis, and largely in those which followed operation.

The committee in Philadelphia has long held where a patient enters hospital in a normal condition with no apparent infection, and after delivery dies of infection, that such a death is preventable. There have been many arguments over such histories. The views of Colebrook and Watson are familiarly quoted in the meetings, and it is exceptional that this coding does not apply.

The fact that all maternal deaths have to have a preliminary assessment by the individual hospital obstetric staff conference brings up sharply to the smallest and most intimately concerned group the technique of their delivery rooms and operating suites when such cases are brought before them. Instances of septic infection ascribed to errors in technique have been found with practically all types of obstetrical operation. Particularly, has this avoidable factor been assigned in forceps or version deliveries when trauma has occurred with death resulting from shock, or in certain instances of gross mishaps in the third stage.

Unpreventable and Preventable Mortality

While it is realized that much of the present maternal mortality could be controlled there are mortalities even with the best available treatment. Such cases are not infrequent. We have termed them unavoidable disasters. In this manner we regard cases of hemorrhage either ante partum or postpartum, when treated promptly and in an accepted fashion with what would appear adequate supportive measures. Certain cases of ectopic gestation if prompt and adequate treatment was given have come under the heading. Toxemic bleeding carefully evaluated from the standpoint of recognition and treatment of the toxemia and its associated hemorrhage have been included here. Such conclusions have only been made after every fact materially influencing the reliability of the decisions has been given the fullest weight.

A fair proportion of maternal deaths do not come under the statistical coding of puerperal causes of death. We have included in our study of maternal mortalities the deaths of pregnant women from every cause in order to bring out the pathological background against which our obstetrical practices are based.

Such deaths from chronic infections, cardiac lesions, renal degenerative, pulmonary infections, lighted up by pregnancy or acute infections as pneumonia, influenza or bacterial endocarditis complicating pregnancy, and particularly surgical lesions or metabolic disorders are labelled intercurrent disease. Such cases are not included in puerperal vital statistics, but a discussion of deaths of pregnant women from medical or surgical diseases constantly serves as a stimulus to the more efficient oversight of pregnant women with minimal extra-genital lesions or diseases in hospital clinic or private practice.

There are other factors which play a part in causing maternal mortality. They may be termed accessory factors. Some of them can be assessed as to their influence, others are undoubtedly potential factors, yet their specific influence cannot be measured. The latter include such general conditions as the character of the population of a given area, the type of housing and overcrowding, the economic status, the nature of attendance, general health of the community and the personal hygiene and mode of life of the individual.

We, as busy obstetricians, may not pay much attention to these factors but in any program of

maternal welfare with wide ideals they must be considered.

The problem of preventing maternal mortality is in my opinion not a difficult one to solve. The responsibility for the solution of this problem rests upon the medical profession, even though patients and community are also implicated in the problem.

The solution must consist in education, continuous education, of all concerned. Long and constant repetition of the preventable factors may be necessary to develop an obstetric conscience and an interest in the medical profession. Once such interest has been quickened other avenues of attack can be opened, the education of the patient and her family arranged for, and community interest aroused.

This is not a difficult task. In only ten years in Philadelphia our committee led the way to a 62 per cent decrease in the maternal mortality rate, a 40 per cent decrease in the stillbirth rate, the institution of group education in maternity hygiene in the prenatal clinics of almost all the larger hospitals, the institution of a series of talks to prospective fathers three times a year at the County Medical Society Building, and the formation of committees to study fetal and neonatal deaths. Practically every hospital maternity division staff in the city now has its own periodic staff conference to intimately examine into its own mortalities, morbidities and intramural problems. When our recent ordinance regarding notification of premature births, copied from Chicago Board of Health, became effective, lay organizations of the city promptly supplied several institutions with incubators and air-conditioning units for nurseries. This was visible evidence of community interest in our problems.

The education of those concerned must always be regarded as a continuous line of assembly. New patients, new physicians, new hospital trustees and newly arrived civic leaders must always be kept informed of our ideals, our problems and our needs in preventing maternal, fetal, and neonatal mortalities. This problem as it may apply to Michigan is in your hands for solution.

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Pregnancy Complicated by Acute Anterior Poliomyelitis*

By J. William Peelen, M.D.
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The occurrence of disease and pregnancy simultaneously is not uncommon. The association of pregnancy and acute anterior poliomyelitis has been rather infrequent, if a review of the literature is a criterion.

Twenty-nine cases reported in some detail have been reviewed, and two new cases have been added. In addition twenty-eight cases are incompletely reported.

Acute anterior poliomyelitis being an infectious disease immediately raises many questions. The most important conclusions obtained from this study are: the usual course of pregnancy does not change; the type of paralysis and complications will determine whether interference with the pregnancy is necessary; and it has not been proven that intra-uterine poliomyelitis occurs.

Few diseases prevent the possibility of gestation; neither does pregnancy immunize a woman against disease. Practically every known disease at some time has been encountered in a pregnant woman. The association of pregnancy and acute anterior poliomyelitis probably occurs more frequently than is reported in the literature.

The first case was reported by Shell[24] in 1906. Since then single cases have been reported at infrequent intervals. The literature was reviewed by McGoogan[15] in 1932 revealing five cases to which he added three of his own. In addition to the completely reported cases, Kleinberg and Horwitz[13] mention a series of thirteen hitherto unreported cases but give no detail. Aycock[1] in 1941 discussing the frequency of poliomyelitis in pregnancy reported the largest series yet on record. Twenty-eight of these cases have previously been reported in the literature and in addition twenty-eight cases, none in detail, had come to the author's attention either by observation or personal communication. Two more cases were reported recently and I am presenting two

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of my own. This discussion will include for the most part those cases which have been reported in some detail. Table I gives a brief summary of the cases.

The following two cases occurred in my practice in 1940:

Case 1.—Mrs. M., aged twenty-nine, para I, gravida II, was admitted to Fairmount Hospital on September 9, 1940. She had been sick for two days. A spinal puncture had been done before admission with a diagnosis of acute anterior poliomyelitis. Her complaints on admission were leg ache and abdominal cramps. The abdominal cramps continued throughout the quarantine period.

I first saw the patient on September 21, 1940, after she was transferred to Borgess Hospital. At this time there was a partial paralysis of both lower extremities and the right shoulder girdle muscles.

Her last menstrual period began on December 27, 1939. Past history was essentially negative. Previous labor eight years ago was normal. The present pregnancy had been uneventful until the patient became ill with poliomyelitis. She was discharged on September 26, 1940. Physiotherapy was continued at home.

The patient was re-admitted to Borgess Hospital on October 3, 1940, having a few irregular uterine contractions and slight bloody show. Active labor began spontaneously the following day. After eight hours of labor the patient was delivered with outlet forceps of a normal baby. The third stage proceeded without incident. The patient had complete amnesia and analgesia for four hours before delivery. Nembutal gr. 7½ and scopolamine gr. 1/150 was used. She had a normal puerperium. Mother and baby were discharged on the eighth postpartum day.

At the present time, two years later the patient is able to be up and around with the aid of crutches and leg braces. The baby is well.

Case 2.—Mrs. K., para II, gravida III, came in on August 28, 1940. Physical examination was essentially negative. During the fourth month of gestation, the patient was awakened early one morning by nausea, vomiting, and severe headache. Her temperature was 103° F. These symptoms gradually disappeared during the next two days. There was no diarrhea. For four days following the onset of the illness the legs ached from the hips down. She was in bed five days. On the second day of her illness she noticed her face was drawn toward the left side and that some paralysis of the right side of the face was evident, mainly about the right angle of the mouth and slightly of the right eye. Food drooled from the right side of her mouth. The right eye could be closed with some effort. On extension of the tongue there was protrusion toward the left for two days. Reading became difficult on account of blurred vision, but there was no diplopia. No paralysis was noted elsewhere. However, she found it difficult to hold her head up. On one occasion the patient was slightly dizzy. For a short time tinnitus was present in the right ear. Numbness of the right side of the face was noticed on the sixth day of the illness. My first impression was acute food poisoning. After the paralysis occurred, I considered "Bell's Palsy". The patient was referred to Dr. Richard U. Light, who made the diagnosis of anterior poliomyelitis affecting the right seventh cranial nerve. It involved chiefly the right half of the lower lip, to some extent the upper lip and very slightly the muscles about the eye.

The patient was next seen at the office seven weeks after the onset of the disease. Routine examinations were normal. She returned one month later. During this time the abdomen had greatly enlarged, the fundal height being twenty-six centimeters above the symphysis pubis. Fetal heart tones were strong and the rate was 132. A tentative diagnosis of either acute polyhydramnios or multiple pregnancy was made. Three weeks later at the time of the routine prenatal examination, the patient stated that she "had not felt life". Fetal heart tones were not heard. The abdomen was smaller than at the last examination. She was seen at one to two week intervals until her labor began sponstaneously at the beginning of the ninth month; about four months after the onset of poliomyelitis and two months after the patient last felt fetal movements. Labor was rapid. The fetus presented a footling breech. The other foot was brought down and the fetus was extracted until the umbilicus was just outside the vaginal introitus. It was fixed at this level and upon examination it was evident that a short cord was the cause. The cord was clamped and cut. Then the stillborn fetus was delivered without difficulty. The third stage was normal. On inspection of the cord and placenta, it was noted that the cord had been twisted over and over shortening it considerably. This may have been the cause of the stillbirth. No abnormalties were found on the macerated male fetus. The puerperium was entirely normal.

One year and a half later, the facial paralysis is evident only when the patient is very tired.

Possible Etiological Factors in the Onset of Poliomyelitis

In 1931 the *Journal of the American Medical Association*[20] stated that "although there are no statistics available on the occurrence of poliomyelitis during pregnancy, some observers have the impression that the disease occurs in the later months of pregnancy more often than would be expected if it were only a coincidence. If this proves to be the case, it would suggest that some physiologic alteration during pregnancy may affect susceptibility to infection with poliomyelitis".

In 1932 Junglebut and Engle[11] stated "that both early pregnancy and infancy are the high water marks of natural resistance to poliomyelitis. Their reason is that higher antibody titers are commonly found in gravid than in healthy non-gravid persons."

TABLE I.

Case No.	Author	Age	No. of Preg.	Time of onset Mo. Preg.	Type of Paralysis	Result, Mother	Result, Baby
1.	Wickman[26]	27		6	Landry's Ascending type of Paralysis	Died	Died, 6 mo.
2.	Shell[24]	26	2nd	7	Both lower extremities	Normal—term	Normal
3.	Hartman[9]	?	?	7	?	Normal—term	Normal
4.	Hartman	?	?	7	?	Normal—term	Normal
5.	Hartman	?	?	8	?	Normal—term	Normal
6.	Hartman	?	?	8	?	Normal—term	Normal
7.	Hartman	?	?	9	?	Normal—term	Normal
8.	Mueller[18]	?	?	4	?	Died (4th mo.)	Died—4 mo.
9.	Mueller	?	?	9	?	Normal—term	Normal
10.	Mueller	?	?	9	?	Normal—term	Normal
11.	Renault & Martingay[21]	23	3rd	5	Both lower extremities	Normal—term	Normal
12.	Zimmerman[27]	22	?	9	?	Normal—term	Normal
13.	Miller, N. F.[16]	26	3rd	3	Both lower extremities	Normal—term	Bilateral club feet
14.	Miller, N. F.	?	1st	5	Left lower extremity Bladder paralysis	Vaginal Cesarean (6th mo.)	Dead (no deformity)
15.	Ehrenfest[5]	18	1st	7	Right lower extremity	Normal—term	Normal
16.	Hornung & Creutzfeldt[10]	20	1st	8	Landry's Ascending type of Paralysis	Cesarean Section	Normal
17.	McGoogan[2]	24	1st	3	Right lower extremity	Normal—term	Normal
18.	McGoogan	32	2nd	3	Hip muscles and bilateral abdominal muscles	Normal—term	Normal
19.	McGoogan	24	1st	3	Both lower extremities & Right upper extremities	Normal—8th mo.	Premature died in 48 hrs. No. deformity
20.	Brahdy & Lenarsky[3]	22	1st	9	Both lower extremities	Forceps—term	Normal
21.	Brahdy and Lenarsky	23	1st	4	Right lower extremity	Normal—premature	Normal—premature
22.	Brahdy and Lenarsky	19	1st	2	Both lower extremities complete. Back and abdominal, partial	Therapeutic abortion (2 mo.)	Daed
23.	Guttmann[8]	23	?	8	Landry's Ascending type of paralysis	Died	Dead
24.	Pette[19]	?	?	3	Landry's Ascending type of Paralysis	Died	Dead
25.	Klein & Sittig[12]	25	?	9	Landry's Ascending type of Paralysis	Normal	Normal

TABLE I (Continued).

Case No.	Author	Age	No. of Preg.	Time of onset Mo. Preg.	Type of Paralysis	Result, Mother	Result, Baby
26.	Morrow & Lauria[17]	28	?	5	Both lower extremities Partial of both upper extremities	Forceps—term	Normal
27.	Ruhl[22]	27	?	8	?	Normal—term	Normal
28.	Spishakoff; Golenternek and Bower[25]	22	3rd	9	Landry's Ascending type of Paralysis	Normal—premature	Normal—premature
29.	Gillespie[6]	18	1st	7	Landry's Ascending type of Paralysis	Cesarean section	Died in 6 hrs. intracranial hemorrhage
30.	Case 1 (Mrs. K)	25	3rd	4	Partial paralysis of right 7th cranial nerve	Normal	Stillborn no deformity
31.	Case 2 (Mrs. M)	29	2nd	9	Both lower extremities Partial of left upper extremity	Forceps—term	Normal

According to Aycock,[2] the virus of poliomyelitis is widespread but the incidence of the disease in those exposed to the virus is limited and selective. He states, "that some of the selectives indicate that the determining factor, between clinical and subclinical poliomyelitis resides in the host. Familial tendency suggests that this factor is inherent; seasonal and geographic selectivities indicate a physiologic rather than an anatomic character; association with a certain constitutional type points to endocrine dysfunction and the suspected selectivity seen in the occurrence of poliomyelitis during pregnancy, in view of the implication of the nasal mucosa as the portal of entry of the virus, suggests that estrogenic substances are concerned."

Aycock[2] reported two sets of experiments. In the first series estrogens injected into castrate immature female monkeys increased their resistance to intranasal instillation of the poliomyelitis virus. In the second experiment the urines of patients ill with poliomyelitis and healthy individuals were assayed for estrogens. The results revealed a higher average excretion of estrogenic substance in the poliomyelitis group.

These results tend to confirm the statement made in 1931 by the *Journal of the American Medical Association*,[20] that some physiologic alteration may affect susceptibility to poliomyelitis. This factor may be a lowered reserve of estrogenic substances.

Time of Onset of Poliomyelitis by Trimesters

In Aycock's complete series, more cases had their onset in the last trimester than in either the first or second. His results were as follows: 17 per cent in the first trimester; 35 per cent in the second; 43 per cent in the third; and 5 per cent postpartum.

If only the thirty-one cases summarized in Table I are considered, the onset is more frequent in the last trimester and less in the second. The results are as follows: first trimester, 19 per cent; second trimester, 26 per cent; third trimester, 55 per cent. From these conclusions, it may be stated that poliomyelitis begins more frequently in the latter months of pregnancy.

Does Poliomyelitis Change the Usual Course of the Pregnancy?

We know that reproduction represents the highest physiologic changes in a woman and consequently calls for the greatest functional activity of practically all her organs. In the normal healthy, the satisfactory adjustment to the greatly increased functional demands is aided by the fact that all organs of the body are endowed with a physiologic reserve available

for emergency. Any additional burden may overtax the reserve capacity of any one or all of these organs.

In this series, the disease and the pregnancy independently followed their usual course. The disease has not produced spontaneous interruption of the pregnancy as is frequent with many acute infectious diseases. Neither has intrauterine death of the fetus occurred during the acute stage of the disease. I do think that the acute anterior poliomyelitis was not a factor in the stillborn fetus in my second case. In summary, it may be stated that poliomyelitis does not change its course adversely.

Does Pregnancy Change the Course of Poliomyelitis?

Greatly increased and enforced overactivity of normal organs may cause them to be overloaded if extra demands are made by intercurrent disease. This is particularly true in the advanced stages of pregnancy where the enlarged uterus exerts pressure against various abdominal viscera. Some of the possible effects are: reduced amplitude of respiratory movements of the diaphragm; interference with intestinal peristalsis; with the passage of urine from the kidney down, and interference with the circulatory system. That pregnancy did alter the course of the poliomyelitis was evident in several instances. In Miller's[16] second case, improvement was prompt following the interruption of the pregnancy. The patient had urinary bladder paralysis with a severe cystitis. The interference with the free passage of urine was evidently aggravated by the enlarged uterus. Bladder paralysis did occur in other cases, but was present for only short periods.

The other group of cases affected were those with Landry's type of ascending paralysis involving the diaphragm with upward extension. There were seven cases with this type of the disease; three of which died undelivered, two delivered normally and two had cesarean sections. The progressive embarrassment in breathing will be the determining factor in deciding whether a section should be done. This procedure is done primarily to aid the patient's lung aeration, and postpone the onset of a fatal respiratory paralysis rather than to stop the extension of the disease.

Spishakoff, Golenternek and Bower,[25] used a respirator in maintaining respiration before and during delivery. The result was good for both mother and baby. The mother's breathing improved immediately. According to the essayists, it was due to the increased freedom of diaphragmatic motion. The improvement continued so that by the eighth postpartum day, the patient was able to maintain normal respiration without the aid of the respirator. The other case delivered normally.

The two patients who had Cesarean sections, namely, Hornung's[10] and Gillespie's,[6] were done to prevent the progressive development of increasing respiratory embarrassment. Both mothers improved. The first baby was fine. The second died six hours after delivery due to intracranial hemorrhage which was confirmed by autopsy.

Does Poliomyelitis Change the Course of Labor?

Spontaneous labor in cases of decentralized uterus are reported in the literature from time to time. Good[7] has shown by experiments on guinea pigs that uterine musculature contracts well, and that no hemorrhage occurs in the third stage of labor when transection of the cord has destroyed a direct connection between the uterus and the central nervous system. Cohen[4] states that normally parturition may be considered as reflex act, the center of which is situated in the lumbar region of the spinal cord. He reported a case of a normal delivery with complete absence of pain, which had metastatic carcinoma of the spinal cord in the lower thoracic region.

The twenty-three patients who delivered normally all had spontaneous onset of labor and progressed normally through the third stage, incluring the puerperium. The difficulties which might be expected would be no different than those ordinarily encountered in obstetrics.

Does Poliomyelitis Affect the Fetus?

The presence of an intercurrent disease in the mother has progressively less effect on the fetus as pregnancy advances. In acute infectious diseases the newborn infant may show evidence of the transmitted disease in an active state such as syphilis or smallpox, or it may even exhibit the proof of recovery, from the transmitted disease as in smallpox. Kramer and Wright[14] reported the case of a pregnant woman who died of cerebral spinal epidemic meningitis be-

fore delivery. Autopsy showed the same disease to be present in the fetus. An acute anterior poliomyelitis is an acute infectious disease, the possibility of affecting the fetus readily becomes apparent. However, if the virus of poliomyelitis does not enter the blood stream as is generally considered to be correct, it is reasonable that the fetus could not be infected in utero.

If the complete series, including the cases from the personal records of Aycock's[1] are considered, only three cases suggest the possibility of intrauterine poliomyelitis. Miller[16] believes the bilateral club foot was not the result of intrauterine poliomyelitis, but rather a congenital deformity. In the other two cases, the data available is insufficient to confirm or refute the possibility of intrauterine infection.

Severin[23] in 1939 reviewed the literature on acute anterior poliomyelitis in the first month of life and found only twenty-two cases, and reported one of his own. He concluded that the possibility of intrauterine infection is not proven convincingly in one single instance. His conclusion confirms the finding in the present study that intrauterine poliomyelitis does not occur.

Summary and Conclusions

1. Pregnancy and acute anterior poliomyelitis are probably associated more frequently than is reported in the literature.

2. A physiologic alteration in the reserve of estrogenic substances in the body may be a factor in the susceptibility to poliomyelitis.

3. Poliomyelitis associated with pregnancy has its onset more often in the latter months of gestation.

4. Poliomyelitis does not change the usual course of pregnancy.

5. The type of paralysis and complications will determine whether interference with the pregnancy is necessary.

6. Labor should be no different than that ordinarily encountered in obstetrics.

7. It has not been proven that intrauterine poliomyelitis occurs.

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VITAMINS DON'T STOP COLDS

Taking vitamin pills will not reduce the number of colds nor the severity nor duration of colds in persons on a reasonably adequate diet, it appears from experiments reported by Dr. Donald W. Cowan, Dr. Harold S. Diehl and Dr. A. B. Baker, of the University of Minnesota Students' Health Service (*Journal, American Medical Association,* Dec. 19).

Their experiments were made in two successive winters under carefully controlled conditions with several hundred University of Minnesota students who were especially susceptible to colds. The effects of large doses of vitamin C alone (the citrus fruit vitamin that prevents scurvy) and of large doses of vitamins A, B_1, B_2, C and D were tested. *Science News Letter,* December 26, 1942.

Achlorhydria and Gastro-Intestinal Disturbances

The Value of Substitution Therapy*

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■ During the past year, I have had the opportunity of observing seven patients with presenting complaints referable to gastro-intestinal disturbances, in whom gastric analysis revealed an achlorhydria. The gastro-intestinal complaints in each of these cases subsided promptly with the exhibition of dilute hydrochloric acid. Most of these patients had spent several years seeking relief by the use of alkaline powders or patent medicines, either on their own initiative or on the advice of physicians, and the patients were all exceedingly grateful for the prompt relief afforded them by the dilute hydrochloric acid. The treatment is simple, is known to every physician, but is too infrequently used.

This experience emphasized to me the value of routine gastric analysis in the investigation and evaluation of gastro-intestinal disorders. The universal availability of the roentgenological examination of the gastro-intestinal tract perhaps has tended to render less obvious the diagnostic leads obtainable by gastric analysis.

The literature on achlorhydria is extensive, but a comprehensive review was published by Oliver and Wilkinson in 1933,[1] and a briefer review by Winkelstein appeared this year.[2] Winkelstein found a 1.2 per cent incidence of true achlorhydria (i.e., achlorhydria unassociated with organic disease) in 5,585 consecutive test meals at the New York Mount Sinai Hospital. This incidence is much lower than the usually quoted figures, but it is probably the most correct figure available because of the exacting criteria of Winkelstein's method.

Etiology

The list of diseases in which achlorhydria has been reported is impressive: carcinoma of the stomach, pernicious anemia, chronic gastritis, hyperthyroidism, gall-bladder disease, hepatic cirrhosis, subacute yellow atrophy of the liver, gastric ulcer, appendicitis, mucous colitis, ulcerative colitis, malignancy of the bowel, subacute combined sclerosis, microcytic hypochromic anemia of women, sprue, pellagra, chronic pancreatitis, pancreatic carcinoma, diabetes mellitus, rheumatoid arthritis, allergies, psoriasis and any protracted febrile state such as tuberculosis or malaria. However, the most important diseases to search for when achlorhydria is found are gastric carcinoma, pernicious anemia, and chronic gastritis, since it is in these three diseases that the percentage incidence of achlorhydria is greatest. Therefore, it is apparent that any patient in whom achlorhydria is found deserves detailed investigation of the blood and careful x-ray examination of the gastro-intestinal tract.

In achlorhydria not associated with the diseases listed, there may be no symptoms whatsoever, or there may be a great number and variety of indefinitive gastro-intestinal complaints such as flatulence, epigastric pain, nausea, vomiting, heartburn, constipation or diarrhea, anorexia, soreness of the tongue. There may be a very close similarity to the symptoms characteristic of a duodenal ulcer. X-ray examination in uncomplicated achlorhydria generally reveals gastric hypermotility and rapid emptying. The stools may contain undigested meat fibres because of the hypermotility of the digestive tract. The gastro-intestinal difficulties may lead to general malaise, ready fatiguability, insomnia, weight loss, depression, malnutrition, and vitamin deficiency. These variegated complaints are too often misinterpreted as due to an anxiety neurosis, or to "functional indigestion," or to neurasthenia, or some other wastebasket diagnostic category.

It is apparent, then, that achlorhydria is by no means an insignificant incidental finding, because (a) it may be a manifestation of a serious underlying disease or (b) it may be responsible for a disabling array of gastro-intestinal disturbances.

Diagnosis

The diagnosis of achlorhydria is relatively simple. Free hydrochloric acid is considered absent if the gastric contents fail to turn Toepfer's reagent red. The color change of Toepfer's

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reagent occurs below a pH of 3.5, and free hydrochloric acid is assumed to be responsible for acidity below a pH of 3 to 3.5. For purposes of expediency, we have shortened the usual fractional gastric analysis thus:

1. The fasting contents are aspirated.

2. The alcohol test meal is administered, and samples of gastric contents are taken at one-half hour and one hour after the administration.

3. A few drops of Toepfer's reagent are added to the fasting specimen and to the one-half hour specimen immediately after they are aspirated. If the red color does not appear, 0.6-1.0 mgm. of histamine hydrochloride is injected subcutaneously immediately after the second specimen is aspirated, and the one hour specimen is taken at the usual time. Titrations are then carried out in the laboratory. If free hydrochloric acid is absent from all three specimens, we consider that the patient has achlorhydria. Winkelstein's criteria for the diagnosis of achlorhydria are somewhat stricter. He uses oatmeal gruel as the test meal, takes more samples over a longer period of time, and has found that the failure of excretion of parenterally injected neutral red by the gastric mucosa is a slightly more accurate gauge of achlorhydria than is the stimulating effect of histamine on the gastric glands. However, for most practical purposes, the abbreviated method described has been found satisfactory.

The pertinent clinical features of the patients we studied are summarized below:

Case Reports

Case 1.—V. D., forty-five-year-old painter, complained of dull aching right upper quadrant pain of five years' duration.

Gastric analysis: Achlorhydria

Gall-bladder series: Negative

Gastro-intestinal series: Normal except for ptosis of transverse colon.

Blood count and volume index: Normal.

Result of treatment with dilute hydrochloric acid: Complete relief.

Case 2.—W. S., Fifty-eight-year-old farmer with a ten-year history of intermittent post-prandial epigastric distress, associated with frequent nausea and vomiting, weight loss, intolerance to many foods, constipation and occasional episodes of diarrhea.

Gastric analysis: Achlorhydria.

Gastro-intestinal series: Negative except for ptosis of transverse colon.

Blood count and volume index: Normal.

Result of treatment with dilute hydrochloric acid: Complete relief.

Case 3.—H. N., fifty-nine-year-old seaman with an eight-year history of post-prandial epigastric pain, associated with nausea and occasional vomiting.

Gastric analysis: Achlorhydria.

Gastro-intestinal series: Negative.

Gastroscopy: Slight patchy atrophy of the gastric mucosa.

Blood count: Normal.

Result of treatment with dilute hydrochloric acid: Complete relief.

Case 4.—W. W., forty-year-old seaman with two-year history of post-prandial epigastric burning distress.

Gastric analysis. Achlorhydria.

Gastro-intestinal series: Coarse gastric mucosal folds.

Red blood count: 4,300,000 with 88 per cent hemoglobin.

Volume index: 1.02.

Corrected cell volume: 45.1 mm.

Result of treatment with dilute hydrochloric acid: Complete relief..

Case 5.—F. K., forty-eight-year-old handyman with three-year history of generalized abdominal cramp-like distress, sensation of fulness, and occasional nausea and vomiting.

Gastric analysis: Achlorhydria.

Gastro-intestinal series: Negative except for hypermotility.

Red blood count: 4,700,000 with 88 per cent hemoglobin.

Volume index: 1.31.

Corrected cell volume: 47.3 mm.

Sternal puncture: Indeterminate.

Result of treatment with dilute hydrochloric acid: Complete relief.

Case 6.—L. H., forty-six-year-old seaman with history of post-prandial distention, nausea and regurgitation, associated with constipation; duration, two years.

Gastric analysis: Achlorhydria.

Gastro-intestinal series: Negative.

Blood count: Normal.

Result of treatment with dilute hydrochloric acid: Complete relief.

Case 7.—P. C., fifty-year-old seaman with history of morning nausea, anorexia, and epigastric pain of "several years'" duration and chronic alcoholism.

Gastric analysis: Achlorhydria.

Gastro-intestinal series: Negative.

Blood count: Normal.

Result of treatment with dilute hydrochloric acid: Complete relief.

Discussion

It will be noted that, in all these patients, the blood and gastro-intestinal tracts were checked. Patients one and two exhibited a ptosis of the transverse colon which was compatible with their constitutional habitus. Patient three exhibited gastroscopic findings suggestive of an atrophic gastritis. Patient four showed a coarse gastric mucosal pattern on x-ray, compatible with a diag-

nosis of chronic gastritis. Patient five exhibited a volume index higher than normal, but there were no clinical or other laboratory evidences of pernicious anemia. The gastro-intestinal complaints of every one of these patients disappeared very dramatically within twenty-four to forty-eight hours after dilute hydrochloric acid was prescribed. One to three c.c. of dilute hydrochloric acid (U.S.P.) diluted in one-half glass of water was taken through a straw (to protect the teeth) at the beginning of each meal. There was no instance of intolerance to the administration of the dilute hydrochloric acid.

During the same period, we observed six other patients in whom achlorhydria was found; two with pernicious anemia, two with multiple sclerosis; one with diffuse meningo-vascular neurosyphilis and an aortic aneurysm, and one with chronic alcoholism and chronic gastritis (as determined by gastric mucosal pattern on roentgenological examination). Of these six patients, five had no gastro-intestinal difficulties. One, the patient with chronic gastritis, was a forty-five-year-old seaman who complained of abdominal pain, anorexia, and flatulence for several days following alcoholic debauches. His complaints subsided with a soft diet, and did not require dilute hydrochloric acid.

Questions to Be Answered

Study of these cases suggested several questions:

1. *Why do some patients with achlorhydria complain of gastro-intestinal disturbances, while others are asymptomatic, and how can we account for the symptom-free periods of weeks or months in patients with definite achlorhydria but with only intermittent episodes of distress?*

The answer is obscure. We know that achlorhydria due to a protracted fever may disappear when the fever subsides, and we know that, rarely, the achlorhydria of pernicious anemia (and achlorhydria is a *sine qua non* in the diagnosis of pernicious anemia) will disappear when the anemia is controlled with liver extract. However, patients may have achlorhydria for years with no complaints, or may develop gastro-intestinal disturbances at any time. The "trigger mechanism" is not clear. Occasionally, an alcoholic debauche may excite symptoms in a patient with achlorhydria, as in the one we described, but there is no necessity here to blame the achlorhydria for the disturbances.

2. *What is the relation between achlorhydria and gastritis?*

It is the opinion of most students that chronic gastritis is one of the chief causes of achlorhydria. Oliver and Wilkinson classify the etiology of achlorhydria thus:

(1) Familial, due to a constitutional abnormality.

(2) Due to chronic gastritis from direct irritation or from hematogenous intoxication.

(3) Neurogenic origin.

It will be noted that patients three and four of our series exhibited gastroscopic or roentgenological evidence of chronic gastritis. We did not do gastroscopies on all our patients, but Winkelstein reported the results of gastroscopic examination of fourteen patients with true achlorhydria of undertermined etiology, and found that all presented evidence of severe gastritis. However, such evidence, although suggestive, does not conclusively prove that the achlorhydria is a result of the gastritis. It is even conceivable that the achlorhydria may be a significant factor in the development of the gastritis.

3. *What is the likelihood that a patient with achlorhydria will develop a pernicious anemia or carcinoma of the stomach?*

Again the answer is not known. Achlorhydria may precede pernicious anemia by many years, but there is no method of determining whether an individual with achlorhydria will or will not develop pernicious anemia. Patient five in our series had a high volume index, but whether or not he is in the early phases of a pernicious anemia cannot be answered at present.

The relationship between achlorhydria and gastric carcinoma is also obscure. The incidence of achlorhydria in gastric carcinoma has been reported to be between 50 and 90 pr cent by various observers. Yet, carcinoma of the stomach is much more common in males than in females; and, by and large, more females than males have achlorhydria.

4. *How does the dilute hydrochloric acid act?*

Hydrochloric acid acts in the stomach in two ways: (1) It furnishes the acid medium necessary for the conversion of pepsinogen to the ac-

tive enzyme, pepsin. The pepsin can then exert its proteolytic action. (2) It acts as a bacteriocidal agent. It is clear that the dilute hydrochloric acid is merely substitution therapy; there is no known way of stimulating the secretion of hydrochloric acid by the gastric mucosa in people with proven achlorhydria. However, the simple measure of adding dilute hydrochloric acid to the meals of patients with gastro-intestinal disturbances secondary to achlorhydria serves to alleviate the distress. Dilute hydrochloric acid is generally of no value in pernicious anemia, unless there are gastro-intestinal symptoms secondary to the achlorhydria. In a very occasional patient with pernicious anemia receiving liver therapy, the hemoglobin regeneration will lag behind the red cell count, and supplementary iron therapy may be indicated. In such cases, it might be wise to administer dilute hydrochloric acid, since the iron is apparently absorbed more readily from an acid medium.

Summary

Seven patients with gastro-intestinal disturbances due to achlorhydria are described.

In each patient, the administration of dilute hydrochloric acid resulted in prompt subsidence of the complaints.

The problem of achlorhydria is briefly discussed.

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Tuberculosis lies in wait particularly for the young adult, whose services today and after the war must be of supreme value to the nation. Tuberculosis always increases in wartime, and measures must be taken now if the increase that we may expect in the near future is to be stemmed. Existing tuberculosis services deal with those who have symptoms of disease, or who feel ill. A new advance is now needed. This means finding cases in whom the disease has started, but not yet caused the patient to feel ill. Often nothing may be necessary other than careful watching; in some, short treatment is required, but in all cases there is better hope of eradicating the disease.—From *Bull. of Nat'l Assn. Prev. of Tuber.*, Eng., Jan. 11, 1942.

Blindness in Michigan

A Survey

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■ Enrollment of the blind who are eligible for assistance under the Aid to the Blind provision of the Social Security Act has been proceeding during the last three years in most of the states, and a mass of statistical data has been assembled. While the collected data leave wide lacunæ still unfilled and, furthermore, doubtless contain numerous inaccuracies, they should nevertheless, when brought together and thoroughly studied, provide us with a fuller and more trustworthy picture of blindness in this country than any we have previously had.

The educational possibilities of this material ought not to be neglected. They should be used for enlightening the public as to the causes of blindness and the means by which many of these may be effectively combated, for quickening the interest of the general medical profession in the medical aspects of blindness, and for advancing scientific knowledge of the importance and relations of the various factors that may be concerned in sight destruction. The fact that at present the data afforded may be incomplete and in certain respects unsatisfactory; ought not to deter us, for if the ophthalmological profession now throws itself with some ardor into this study, we may confidently expect that the certifying physicians' reports will, as a natural consequence, become more complete and specific as times goes on.

It is with these thoughts in mind that I have analyzed the mass of detailed information which was very kindly placed at my disposal by the Michigan State Bureau of Social Security, under whose authority applicants for Aid to the Blind in this state are examined. I have recognized that the material is perhaps too small to sustain, by itself alone, the close analysis to which I

have subjected it, but have felt that if similar studies were made in all of the states—a few such are already at hand—the composite of the results would be of great value.

TABLE I

Age	Cases
17— 19	8
20— 29	89
30— 39	251
40— 49	300
50— 59	422
60— 69	557
70— 79	184
80— 89	57
90— 99	7
100—104	4
Age unknown	252
Total	2,131

The figures here presented are as of March 1, 1941. A total of 2,131 blind persons are included. Excluded are (1) all blind children and young persons under seventeen years of age, who are cared for at the State School for the Blind, (2) blind residents in other public or private institutions, (3) persons whose impaired vision is a secondary consideration and who receive a pecuniary grant from the Old Age Assistance Bureau, (4) blind persons who are not in need of pecuniary aid, (5) all persons with vision better than 20/200 in the better eye.

Race, Sex and Age

Of the 2,131 blind persons certified to receive aid, 1,882 were white, 236 Negro and nine Indian, the race of four is not disclosed. Of the total 1,553 were males, 576 were females, and in four cases the sex is not stated. The age distribution is shown in Table I.

The striking feature of this table is the rapid increase of blindness decade by decade up to the age of seventy years and the precipitous fall after this age. Recent Canadian statistics on the blind[1] fail to show this fall. The explanation probably lies in the large number of persons of unknown age in our Michigan total, 252 as compared with twelve in the larger Canadian total. Persons who do not know their age are usually in advanced years. If these 252 persons of unknown age were distributed over the latter age groups, they would greatly modify the picture. This is an instance of the distortion which is liable to affect all tables where any considerable portion of the total must be classified as "unknown," "undetermined," or "not specified." In studying the etiologic analyses of the Michigan material it is constantly necessary to keep in mind the possibility of such distortion.

It is regrettable that there are no figures in our material showing the age at which blindness occurred.

Etiology

The classifications recommended by the Committee on Statistics of the Blind have been followed in the analysis of the Michigan material. These classifications show (1) the basic disease or traumatic or chemical injury, (2) the ocular structure concerned, and (3) the nature of the damage to this structure which was the direct cause of the loss of vision.

In Table II the total material is shown classified in two of these ways; that is, (1) according to the basic etiology and (2) topographically, according to the ocular structure concerned.

In order of frequency we have infectious diseases with 494 cases or 23.18 per cent of the total and traumatic and chemical injuries in second place with 333 cases or 15.62 per cent of the total; congenital and hereditary origin (excluding syphilitic) in third place with 252 cases or 11.82 per cent, followed by noninfectious systemic diseases in fourth place with eighty-three cases or 3.89 per cent. Here it will be noted that infectious diseases were nearly six times as dangerous to sight as noninfectious systemic diseases. Neoplasms stand in fifth place with thirty-three cases or 1.55 per cent, and toxic poisoning (excluding industrial) in last place with only nine cases, or 0.41 per cent of the series. There remain 927 cases or 43.50 per cent of the total, with etiology undetermined, unknown to science or not specified.

Of the 333 persons blinded by traumatic or chemical injury, 204 or 61.2 per cent received the injury outside of industry and 129 or 38.8 per cent in industry. In sixteen cases it is not recorded where the injury was received. Thirty-

five of the injuries resulting in blindness were received in play or sport and forty were incidental to surgical procedures. Only nine cases are blamed on street or traffic accidents. It is probably much greater than the recorded data indicates.

Of the 252 cases of blindness of congenital or hereditary origin (excluding syphilitic), 162

TABLE II

Etiological (All Causes) / Topographical (All Causes)		Per Cent	Eyeball	Conjunctiva	Cornea	Iris and Ciliary Body	Crystalline Lens	Choroid and Retina	Optic Nerve	Vitreous Humor	Miscellaneous and Ill-defined
			26.84	.33	10.09	3.52	18.30	10.98	19.99	.84	9.10
Infectious Diseases	494	23.18	18	6	166	61	11	78	140	3	11
Traumatic and Chemical Injuries	333	15.62	201		13	2	17	46	41	2	11
Toxic Poisoning (Exclud. Industrial)	9	0.41	1	1		1			5	1	
Neoplasms (All types)	33	1.55			1				30	1	1
Noninfectious Systemic Diseases	83	3.89	3		4	2	17	23	32	1	1
Congenital and Hereditary Orig. (Exclud. syphilitic)	252	11.82	68		8	1	77	66	18	3	11
Etiology Undetermined, unknown or not specified	927	43.50	281		23	8	268	21	160	7	159
Total	2131		572	7	215	75	390	234	426	18	194

seems worthy of note that industrial diseases (including poisoning) led to loss of vision in only five persons.

Table III presents a break-down of the infectious diseases producing blindness.

In this series the three infectious diseases producing the greatest amount of blindness are syphilis, with 146 cases or 29.4 per cent of all blindness due to infectious diseases, ophthalmia neonatorum, with 100 cases or 20.0 per cent of such blindness. The percentages for opthalmia neonatorum and for trachoma may be taken as measurements of the danger from these diseases as it existed a certain number of years ago and not as it exists at present. The youngest person blind from trachoma in this series was forty years old and the remaining persons blind from this disease were all older than fifty-five. For syphilis the situation is different. We know that this disease has not been brought under control and there is evidence that blindness from optic atrophy, the incidence of which is to some degree an index of the amount of syphilitic blindness, is increasing. Furthermore, the actual amount of blindness due to syphilis in this series

TABLE III. INFECTIOUS DISEASES PRODUCING BLINDNESS

Cause	Cases	Per Cent of Group	Per Cent of Series
All Infectious Diseases	494	100.0	23.18
Diptheria	1	.2	.05
Gonorrhea (exclud. O.N.)	2	.4	.10
Measles	12	2.4	.56
Meningitis	39	7.8	1.80
Ophthalmia Neonatorum	100	20.0	4.69
Scarlet Fever	24	4.8	1.12
Septicemia	1	.2	.05
Smallpox	7	1.4	.35
Syphilis	146	29.4	6.85
Trachoma	7	1.4	.35
Tuberculosis	8	1.6	.38
Typhoid Fever	4	.8	.20
Infantile Paralysis	6	1.2	.30
Other infections, specified	11	2.2	.49
Infections, not specified	126	25.2	5.91

are listed as of congenital origin with cause not determined and eighty as of hereditary origin. No cases are assigned to consanguinity. In ten cases it is not specified whether the origin is regarded as congenital, hereditary or consanguineous.

TABLE IV. OCULAR CAUSES OF BLINDNESS IN TEN OR MORE CASES

Ocular Lesion or Disorder	Cases	Per Cent of Series
Optic Atrophy	396	18.58
Cataract	386	18.11
Glaucoma	236	11.07
Other Degenerative Changes in Eyeball	204	9.57
Retinal Degeneration (Including Pigmentosa)	52	2.44
Iritis	51	2.39
Errors of Refraction	50	2.34
Chorioretinitis	43	2.01
Keratitis (All types)	34	1.59
Detached Retina	32	1.50
Sympathetic Ophthalmitis	30	1.47
Developmental Anomalies	29	1.36
Choroiditis	26	1.22
Retinitis	20	.94
Iridocyclitis	19	.89

Diabetes and vascular diseases account for twenty-eight and twenty-one cases, respectively, of the eighty-three cases of blindness attributed to noninfectious systemic diseases. Diseases of the kidney are blamed for sixteen cases, and diseases of pregnancy and childbirth for another four. Ten cases are attributed noninfectious diseases of the central nervous system. Other systemic diseases, listed as "specified" or "not specified," account for four cases.

There is no information as to the nature of the neoplasms which led to destruction of sight in thirty-three cases and the poison or poisons which caused blindness in the nine cases of non-industrial toxic poisonings are not among those listed.

Finally, the large group of 927 or 43.5 per cent of cases with etiology undetermined or not specified is subdivided into three groups: (1) One comprising recognizable disease entities, the etiology of which is unknown to science (such as primary glaucoma and senile cataract); (2) Cases of which the examining physician states that he was not able to determine the etiology; and (3) Cases in which the physician made no notation as to etiology.

Referring again to Table II and examining the topographical distribution of our 2,131 cases, we find that the lesion producing blindness concerns the eyeball in 572 cases, or 26.84 per cent, the crystalline lens in 390 cases or 18.30 per cent, the optic nerve in 426 cases or 19.99 per cent, the choroid and retina in 234 cases or 10.98 per cent, the cornea in 215 cases or 10.09 per cent, the iris and ciliary body in seventy-five cases or 3.52 per cent, the vitreous humor in eighteen cases or 0.84 per cent and the conjunctiva in seven cases or 0.33 per cent. In this classification blindness originating in an affection of the conjunctiva but caused proximately by a complication or sequela in another structure of the eye is credited to the latter structure. The 194 cases, or 9.10 per cent, are listed topographically as miscellaneous or ill-defined.

Table IV presents a listing, in order of frequency, of the ocular lesions and disorders which were found to be the direct cause of blindness in ten or more cases of the series.

It may be of sufficient interest to mention further that in only eleven cases was interstitial keratitis given as a cause of blindness, and that twenty-two cases were due to motor anomalies, eight cases of amblyopia ex anopsia dependent on strabismus.

The amount of blindness ascribed to errors of refraction in this series is surprising and even puzzling, especially since in forty-four cases is myopia specified. It is not duplicated in other series which the author has seen. It must, of course, be understood that the present writer has accepted the data as presented to him and is dealing with them only as analyzer and commentator. He is in no position to go behind these data and explore their bases, or to examine them critically.

In this series the two leading ocular causes of blindness developing from infectious diseases are lesions of the cornea (33 per cent) and atrophy of the optic nerve (28 per cent). In loss of vision from noninfectious systemic diseases,

lesions of the optic nerve hold first place with 38 per cent, and lesions of the choroid and retina come second with 28 per cent.

Lesions of the crystalline lens, chiefly cataract, were the cause of blindness in 30 per cent, lesions of the eyeball in 27 per cent and of choroid and retina in 26 per cent of all blindness of congenital and hereditary origin.

It appears worthy of notice that in each of these three etiologic classifications, nearly 60 per cent of the blindness was produced by only two types of lesions.

Table V shows the ocular lesions which were the immediate cause of the destruction of vision in the most important etiologic disease, considered severally:

TABLE V. OCULAR LESIONS THROUGH WHICH BLINDNESS WAS CAUSED BY DISEASE

	Cases
Syphilis	
Optic atrophy	79
Iritis	11
Corneal ulcers	12
Keratitis, not specified	9
Cataract	6
Iridocyclitis (uveitis)	5
Interstitial keratitis	5
Choroiditis	3
Chorioretinitis	3
Degenerative changes (eyeball)	3
Motor anomalies	2
Optic neuritis	1
Other affection of optic nerve, specified	1
Detached retina	1
Refractive errors	1
Affection of cornea, not specified	1
Lesions, not specified	3
Total	146
Ophthalmia Neonatorum	
Ulcerative keratitis	99
Other affection of eyeball, specified	1
Total	100
Meningitis	
Affection of conjunctiva, not specified	1
Optic atrophy	34
Chorioretinitis	1
Affection of iris, specified	1
Disorganized, atrophic, phthisic eyeball	1
Lesion, not specified	1
Total	39
Diabetes	
Cataract	13
Retinitis	11
Chorioretinitis	2
Optic atrophy	1
Affection of cornea, not specified	1
Total	28

TABLE V.—CONTINUED

	Cases
Scarlet Fever	
Iritis	6
Affection of cornea, specified	6
Optic atrophy	4
Detached retina	2
Chorioretinitis	1
Panophthalmitis	1
Disorganized globe	1
Other degenerative changes (eyeball)	1
Retinitis	1
Lesion, not specified	1
Total	24
Vascular Diseases	
Optic atrophy	16
Cataract	3
Cornea, not specified	1
Intraocular hemorrhage	1
Total	21
Measles	
Ulcerative keratitis	3
Iritis	2
Retinitis	2
Affection of cornea, specified	2
Optic atrophy	1
Degenerative changes (eyeball)	1
Conjunctivitis	1
Total	12
Nephritis and Other Kidney Diseases	
Corneal ulcer	1
Retinitis	6
Optic atrophy	4
Disseminated chorioretinitis	2
Iridocyclitis	1
Cataract	1
Retinal hemorrhage	1
Total	16
Trachoma	
Ulcerative keratitis	3
Pannus	1
Iritis	1
Intraocular hemorrhage	1
Cataract	1
Total	7
Tuberculosis	
Uveitis	2
Iritis	1
Retinitis	1
Chorioretinitis	1
Other affection of choroid and retina	1
Optic atrophy	1
Lesion, not specified	1
Total	8
Infantile Paralysis	
Optic atrophy	4
Affection of optic nerve, not specified	1
Intraocular hemorrhage	1
Total	6
Typhoid Fever	
Choroiditis	2
Iritis	1
Disorganized globe	1
Total	4

TABLE V.—CONTINUED

	Cases
Smallpox	
Keratitis, not specified	4
Iritis	1
Cataract	1
Affection of cornea, not specified	1
Total	7
Diphtheria	
Lesion, not specified	1
Gonorrhea	
Iritis	2
Septicemia	
Optic atrophy	1
Diseases of Pregnancy and Childbirth	
Iritis	1
Optic atrophy	2
Optic neuritis	1
Total	4
Noninfectious Diseases of Central Nervous System	
Motor anomaly, specified	1
Affection of cornea, specified	1
Retinitis pigmentosa	1
Optic atrophy	5
Affection of optic nerve, not specified	1
Lesion, not specified	1
Total	10
Other Noninfectious Systemic Diseases	
Panophthalmitis	2
Optic atrophy	2
Total	4

In 927 cases, in which the etiology is stated to be unknown to science, undetermined by the certifying physician and the etiology not specified, the leading occurring sight-destroying ocular lesions were:

	No. Cases
Cataract	267
Glaucoma	236
Optic atrophy	154
Myopia	32
Lesions of cornea, various	23
Lesions of choroid and retina, various	21

Various others in lesser numbers.

In the foregoing we have investigated statistically the relation of etiology to ocular lesion from the standpoint of the etiology. It remains to consider the same relation from the standpoint of the ocular lesion. A few of the important lesions must suffice.

Cataract (386 cases) is ascribed to traumatic and chemical injuries in fourteen cases or 3.63 per cent of all cases of cataract; congenital origin in seventy-seven cases or 19.9 per cent; diabetes in thirteen cases or 3.33 per cent; vascular diseases, other systemic diseases, hereditary origin, diphtheria, trachoma, and neoplasm in from three to one cases each; its cause is given as unknown to science, undetermined by physician, and not specified in 267 cases or 69.1 per cent.

Optic atrophy (396 cases) is ascribed to syphilis in seventy-nine cases or 19.9 per cent; traumatic and chemical injuries in thirty-five cases or 8.84 per cent; meningitis in thirty-four cases or 8.58 per cent; neoplasms in twenty-nine cases or 7.32 per cent; vascular diseases in sixteen cases or 4.04 per cent; congenital origin in seven cases or 1.76 per cent; other infectious diseases, specified; infectious diseases, not specified; measles; scarlet fever septicemia; tuberculosis; infantile paralysis; toxic poisonings; diabetic; nephritis, noninfectious diseases of central nervous system; diseases of pregnancy and childbirth; other systemic diseases; and hereditary origin in from six to one cases each; its cause is given as unknown to science, undetermined by physician, and not specified in 154 cases or 38.8 per cent.

Glaucoma in all of the 236 cases is ascribed to as unknown to science, undetermined by physician and not specified.

Refractive errors (fifty cases) are ascribed to congenital and hereditary origin in fifteen cases; syphilis, nonindustrial injury and industrial injury, one case each; and in thirty-two cases the cause is given as unknown to science, undetermined by physician and not specified.

In the case of cataract and of optic atrophy, it is enlightening to carry examination of the figures one step further. Of the 386 cases of cataract, in only 119 cases was the etiology ascertained, or 30.8 per cent. Of this group with known etiology, roughly 12 per cent is accounted for by mechanical and chemical trauma, and 65 per cent by congenital origin, and 11 per cent by diabetes. These percentages show more clearly the importance of these factors in causation of nonsenile cataract than do percentages based on a total which includes the large senile group and the cases of undetermined or unspecified etiology. Of the 396 cases of optic atrophy, 242 are assigned an etiology. Of these 242, syphilis definitely is accountable for almost 33 per cent, trauma and chemical injury for 14 per cent and neoplasms for 12 per cent.

Meanwhile the State Bureau of Social Security

is to be praised for its excellent work in bringing to the people, the medical profession, and especially the ophthalmologic branch of that profession, in the state, a mass of detailed information, heretofore wholly lacking, on the problem of blindness in Michigan. I am myself witness to the unfailing courtesy and spirit of helpfulness of the Commission, who, with great kindness, have promptly put at my disposal for the purposes of this study all of the pertinent data in their possession, and I take this opportunity to thank them.

Surveys of Blindness in Five Other States

For comparison with the Michigan data, reports of surveys of blindness are at hand from Missouri (5,927 adults),[2] Indiana (2,551 adults),[3] New Jersey (2,131 persons),[4] Pennsylvania (18,193 blind eyes),[5] and Louisiana (700 persons between the ages of sixteen and sixty-four —interim report).[6]

Trauma, congenital origin and syphilis, which, in this order, are the leading causes of blindness in the Michigan series, appear also leaders in New Jersey and Louisiana, but in varying order of frequency in Louisiana: syphilis, trauma, congenital origin. In Missouri and Indiana trachoma is the chief cause of blindness. In the two largest cities of Missouri, St. Louis and Kansas City, optic atrophy is responsible for 23 per cent of all blindness and as this lesion is syphilitic in a high percentage of cases, syphilis may with great probability be assumed to be the chief cause of blindness in these cities. In Indiana trauma and syphilis occupy second and third places, respectively, after trachoma. In the Pennsylvania statistics the basic etiology is not systematically given.

The three ocular lesions immediately responsible for the greatest amount of blindness in the six states under consideration are shown in Table VI, arranged in decreasing order of frequency.

TABLE VI. LEADING CAUSES OF BLINDNESS IN SIX STATES
(Ocular Lesions)

Michigan	Missouri	Indiana	New Jersey	Pennsylvania	Louisiana
Optic atrophy	Cataract	Cataract	Optic atrophy	Cataract	Optic atrophy
Cataract	Optic atrophy	Corneal ulcers and pannus	Cataract	Uveitis	Cataract
Developmental Anomalies and degenerative changes	Corneal ulcers	Optic atrophy	Glaucoma	Glaucoma	Iridocyclitis (Uveitis)

Blindness in the United States

Full and accurate information on blindness in the United States is lacking. The General Census of 1930 reports 63,489 blind persons, fifty-two per 100,000 of the population. There is reason to believe that the actual number is far greater, possibly eighty or ninety blind persons per 100,000.

A special report on the blind was published by the Bureau of the Census in 1920 and has been analyzed by Best.[7] In this report, the leading cause of blindness in the United States is given as accident or other injury, including sympathetic ophthalmitis. Sixteen and five-tenths per cent of all blindness is held due to this cause. This figure may be compared with 15.6 per cent in the Michigan series. Infectious diseases are blamed for approximately 13 per cent of all blindness, which is under the Michigan figure of 23.18 per cent. Congenital origin with cause not stated is credited with 7.4 per cent of blindness; in the Michigan series, with 11.82 per cent. The three ocular lesions responsible for the greatest amount of blindness are given as cataract (13.7 per cent), glaucoma (5.4 per cent), and optic atrophy (4.9 per cent). These figures are all three far below those of the Michigan series, which are: Optic atrophy, 18.58 per cent; cataract, 18.11 per cent; and glaucoma, 11.07 per cent.

The recent National Health Survey,[8] made by the United States Public Health Service, coöperating with the Works Progress Administration, used the sampling method in its investigation of blindness in the nation. In eighty-three cities with a total population of 5,502,391, the enumer-

ators found 2,053 blind persons. In this survey a serious effort was made to obtain from the family physician verification or correction of the etiologic diagnosis supplied by the blind individual or his family. The data on this point ought, therefore, to be more reliable than similar data in the Census returns. Accidents are held accountable for 20.6 per cent of blindness; congenital origin, for 7.3 per cent. Cataract is named as "the most frequent single cause" of blindness; it was found in 19.3 per cent. The classifications used by the National Health Survey differ from those of the Committee on Statistics of the Blind and it is henceforward impossible to make comparisons. Disease of all kinds is held responsible for 72 per cent of all blindness found; disease of the eye, other than cataract, for 11.9 per cent; general infectious and parasitic diseases for 5.6 per cent; chronic diseases for 5 per cent; cerebral hemorrhage for 3.7 per cent; senility for 8.2 per cent, and unknown disease for 14.8 per cent.

An analysis of 2,702 children in twenty schools for the blind was recently made by the Committee on Statistics of the Blind.[9] A congenital or hereditary origin is ascribed to 51 per cent, and infectious origin to 28.6 per cent, a traumatic or chemical origin to 7.8 per cent of cases. Prenatal syphilis was given as cause in 4.7 per cent; gonococcal ophthalmia neonatorum for 3 per cent and ophthalmia neonatorum with no infectious agent specified for 7.7 per cent—together nearly 11 per cent of blindness is here ascribed to ophthalmia neonatorum. Cataract and optic atrophy were the two ocular lesions responsible for most blindness (15.7 and 14.0 per cent, respectively).

From a study of Census reports and reports of Schools for the Blind, reaching back to 1890, Best[7] concludes that blindness from childhood infectious diseases, trachoma and ophthalmia, also from certain types of accidents, is on the wane, while blindness from glaucoma and from optic atrophy are increasing.

Causes of Blindness in Great Britain

A number of important studies on blindness in Great Britain[10,11,12,13] have recently appeared. The two main differences between these British statistics and our own would seem to be a higher percentage of blindness from infectious diseases and a lower percentage from accidents in Great Britain; also, a somewhat higher proportion of blindness ascribed to syphilis and the importance of myopia in the British statistics.

Discussion

It remains to consider a few of the main causes of blindness from the standpoint of the mode in which the eye is attacked and the possibilities of prevention of loss of sight and, where possible, restoration of vision. In the prevention of blindness, three measures deserve our special efforts as capable of yielding the largest harvest of results. These are (1) prevention of traumatic injuries to the eye and of sympathetic ophthalmitis, (2) control of syphilis, and (3) the proper management of every patient with glaucoma who is not yet blind. In restoration of sight, the most promising field for large results is cataract.

The prevention of traumatic injuries to the eyes lies chiefly in the hands of safety engineers for industry and traffic, of parents and playground supervisors, and of the individual himself. But in the prevention of blindness from such injuries, the physician has often a grave responsibility. In all trauma to the eye, the utmost care should be exercised to avoid infection because of the many cases of blindness which develop from infected wounds of the eye. Even a slight, superficial wound may have the most serious consequences if it becomes infected. In intraocular foreign body, if consisting of certain metals, the danger of destruction of the nerve cells by chemical action if the metal remains in the eye is added to the danger of traumatic tissue damage and of infection. A penetrating wound of the eye in the region of the ciliary body presents the added danger of giving rise to sympathetic ophthalmitis in the other eye. The first step in prevention is the aseptic toilet of the penetrating wound. If inflammation persists overlong in the wounded eye, its sacrifice must be seriously considered before the second eye becomes affected.

Recognition of the important part played by syphilis in the destruction of vision stems from investigations carried out independently in various parts of Europe in the period since the World War. Beigelman[14] recently reviewed a number of these studies and pointed out that regardless of differing economic and social conditions, of standards of living and sanitation in the countries in which the studies were made,

the investigators arrived at figures which hardly deviate from a central figure of 15 per cent for the proportion of blindness in their respective countries which originated in syphilis. Certain smaller studies made in the Western Hemisphere indicate that what was found true in Europe would be found true here if the subject were thoroughly investigated.

There is not a tissue of the human eye but is capable of reacting to the syphilitic virus by inflammatory or degenerative processes. In congenital syphilis ocular symptoms are said to be more frequent than positive blood Wassermann reactions. Blindness in congenital syphilis may develop early or late. The cornea (interstitial keratitis), choroid and retina and optic nerve are structures likely to be affected. In early acquired syphilis a neglected iritis may end by destroying vision. Still more menacing to sight is optic neuritis, a later appearing symptom. In the third stage of syphilis the choroid and retina are liable to be the seat of destructive inflammatory changes. Optic atrophy is late in appearing, but is the gravest of the many manifestations of syphilis in its effect on vision, as it marches steadily on toward blindness and we have no means to stop its course.

The problem of prevention of blindness from acquired syphilis is the problem of the eradication of syphilis itself. The answer to the problem of the prevention of blindness from congenital syphilis is, meanwhile, adequate treatment of the syphilitic expectant mother, begun before the fifth month of pregnancy.

Glaucoma is caused by increased intraocular tension from accumulation of fluid within the eye. The reason for this accumulation is blocking of the natural means of exit. Glaucoma tends inevitably to blindness if it is neglected. It is usually possible to control the condition and stop the progress of the loss of vision by instillation of a miotic ("drops") or, where this fails, by surgery. The aid of the operation is to recreate a channel for escape of the intraocular fluid. Neither drops nor operation cures the (usually) unknown cause and the patient must remain under the supervision of the physician indefinitely. This is the crux of the problem of prevention of blindness from glaucoma and the rock on which prevention too often splits. Only second in importance is the education of the glaucoma patient, comparable to the education of the tuberculous or diabetic patient, in a way of life that gives his disease the minimum incitement to strike back at him. The individual with glaucoma must learn to control his emotions.

In respect of ophthalmia neonatorum it is important that the public, the public health officer and the medical profession should realize that this disease has not been eradicated but is being held in bounds. There is reason to assume that any slight let-up of vigilance would be followed by an alarming recrudescence of blindness from this cause.

Trachoma is primarily an economic and public health problem. In one center after another it has been proved that its eradication is possible. A promising new treatment of trachoma is with sulfanilamide. Trachoma blinds from ulceration of the cornea with perforation and prolapse of the iris and secondary glaucoma, from scar tissue formation, from xerophthalmia, and from opening the way to a destructive secondary infection.

It seems beyond dispute that a certain number of persons of all periods of life—children, old people and all ages in between, how many we have no means of knowing—are today remaining blind needlessly. The motion is widespread that blindness is irremediable. It is particularly to be regretted that this notion should have become established, as seems to be the case, in many State Schools for the Blind, or, perhaps it would be more accurate to say, in the dispensers of the funds of these schools. With the advances made in recent times in the surgery of the eye, schools for the blind and pension rolls of the blind should be subjected to the scrutiny of competent ophthalmologists who are thoroughly alive to the present-day possibilities of ophthalmological surgery. For the best results in congenital conditions, the blind child should, however, be treated before he reaches the age of admission to a school for the blind. A baby a few months old may be operated on for cataract. There is no upper limit to the age at which a senile cataract may be removed, and the results of proper surgical treatments are usually good. In various other conditions preventing vision, besides cataract, surgery today offers a prospect of cure; one may mention separation of the retina, dislocation of the lens, and even, in some cases, scars of the cornea. There are, in addition, many thousands of persons with

vision so reduced as to be blind, to all intents and purposes, in the business of earning a living, who could be removed from the ranks of the "economically blind" by the use of contact glasses and telescopic spectacles. Today's interest in the subject of blindness is a challenge to the ophthalmological profession to bring its knowledge into the open and to organize its resources for an attack on this age-old, but today not quite so hopeless, problem of blindness.

Summary

A series of 2,131 cases of blindness in adults are analyzed. These represent the Michigan register of persons eligible to receive State-Federal grants under the Aid to the Blind provision of the Social Security Act.

The chief causes of blindness in this series are infectious diseases and traumatic and chemical injuries, with 494 and thirty-three cases, respectively. Congenital and hereditary origin (excluding syphilitic) and noninfectious systemic diseases come next in frequency, with 252 and eighty-three cases of blindness, respectively. In 927 cases the etiology was unknown to science, undetermined or not specified.

Syphilis is responsible for destruction of vision in 146 cases, which is approximately 7 per cent of the total series and 30 per cent of all cases due to infectious diseases. The chief ocular lesion producing loss of vision is optic atrophy with 396 cases or 18.5 per cent of the total series, followed closely by cataract with 386 cases or 18.1 per cent.

The ocular lesions through which the various basic etiologies most often produce blindness and the basic diseases most frequently behind certain ocular lesions which destroy sight are shown in Tables or discussed.

The most common causes of blindness in five other states and in the country at large are briefly reviewed for comparison.

The time would appear to be ripe for concerted action in prevention of known conditions which lead to loss of vision, and for searching out those cases of blindness which could profit from modern ophthalmological surgery and assuring, so far as possible, that no blind individual who could be given sight remains blind through ignorance, neglect or inability to secure the needed ophthalmological attention.

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Ideal Obstetrics

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More than 90 per cent of pregnant women deliver normally if there is no interference. Even though the abnormal group is relatively small, it includes complications serious enough to cause fetal and maternal mortality.

Doctors in general practice can perform an excellent brand of normal obstetrics. To do so they must be able to distinguish between normal and abnormal cases. The simple axioms set forth in this paper should help them to recognize the abnormal case before ideal conditions have been lost.

During the past two decades a better grade of obstetrics has been taught than ever before. The value of these teachings has not yet been fully realized in the practice of obstetrics.

A well-trained obstetrician, aided by the many recent improvements in medical and surgical care, is equipped to manage the complications of pregnancy. However, the general practitioner is delivering most of the babies for American women, not the specialist. Therefore, this paper is intended as a guide to these men in avoiding the common mistakes which occur frequently in

the obstetrical departments of the average general hospital.

Several years ago conditions became so deplorable that hospital staffs found it necessary to define normal and abnormal obstetrics; and to designate those qualified to perform operative procedures. This classification has improved the results in recognized abnormal cases. Nevertheless, many doctors unknowingly continue to get themselves into embarrassing situations. When danger to mother or baby finally warns them to call a consultant the conditions for ideal management have often been lost.

More than 90 per cent of pregnant women deliver normally if there is no interference. The remaining 10 per cent includes some very unpleasant complications. Even though the general doctor is the trusted friend of the family, oftentimes these serious complications may destroy this family confidence. There should be some simple, fairly fool-proof method of detecting the abnormal cases early, so that the responsibility can be shifted to men with special training.

It is the direct aim of this paper to enumerate certain workable rules for general practitioners who want to detect and eliminate the abnormal cases.

Pregnancy

Let us start at the very beginning. Every patient who has cramps and spotting in early pregnancy should be considered an ectopic pregnancy until proven otherwise. This sounds rash, but isn't. To think of an ectopic pregnancy is usually all that is necessary to lead to its diagnosis. Too many doctors have been taught that this is a rare complication. So much so, that many women are forced to lie around homes and hospitals suffering for weeks with a wrong diagnosis of threatened abortion or pelvic inflammatory disease. Often these patients are moribund by the time a correct diagnosis is established.

Remember that nearly all ectopics, even though ruptured and profoundly anemic, are saved by prompt diagnosis and good surgery. The general man who diagnoses an ectopic pregnancy is respected by the family for his sharpness in detecting this unusual complication. More important, if the diagnosis is missed until too late, the family usually thinks that had an obstetrician handled the case from the start, things would have been different. So, I urge you not to wait for the dramatic episode of street or bathroom fainting to suggest ectopic—*"They are all ectopics until proven otherwise."*

Most abortions can be handled very satisfactorily by a few simple rules. First, *classify the type* before you try to treat them. For example, a woman who spots with a few cramps has a threatened abortion. When clots are passed, it is inevitable. When some tissue is passed and bleeding continues, the abortion is incomplete. When a temperature of 100.4 or above is associated, the abortion is regarded as septic. Remember that the dangerous complications are *fatal hemorrhage* in the incomplete group and *fatal sepsis* in the septic group. Responsibility for these two groups often becomes a heavy burden for the trained obstetrician. By all means shift the responsibility early while conditions are still seemingly favorable. By so doing you are also offering the patient a better chance for recovery.

If you are called to see an abortion that is bleeding profusely—the best immediate treatment is to slip a speculum in the vagina and remove the products of conception which are being expelled through the partially dilated cervix. Use as sterile and as gentle a technique as possible. Then quickly get the patient to a hospital for further treatment.

Late hemorrhages of pregnancy, although serious, are fortunately infrequent. Placenta previa and ablatio placenta kill too many women every year. Patients must be impressed with the seriousness of reporting any vaginal bleeding to the physician. Any case of bleeding in the third trimester should be promptly hospitalized for diagnosis.

These cases are so few in the individual practice that one should not hesitate to refer them for the proper examination. If vaginal examination by an obstetrician reveals only a cervical erosion as the cause of bleeding, the case is no longer in the abnormal group. If a placenta previa or an ablatio placenta is found, careful treatment by a well-trained man is necessary. Even then, these mothers and babies are in a high mortality and morbidity group. Don't be tempted into meddling with them just because they are not bleeding very much. Potentially they are all very dangerous and a mild warning may be followed soon by a fatal hemorrhage. The risk is too great and so unnecessary. A bold examiner will cringe

when gushing bleeding starts, and then wish he had never become involved.

First Stage of Labor

It is easy to become careless in obstetrical case-management because so many labors are normal.

When labor starts you have the responsibility of two lives in your hands, and you can't let go until there is an ending to that labor, happy or otherwise. Eager relatives are closely following your every move and anxiously awaiting the outcome. Public opinion has become a heartless critic of the general man's mistakes, especially since the coming of the obstetrician.

Be sure that you have a good risk from the start—no heart disease, tuberculosis, toxemia or history of dangerous obstetric complications. Don't forget, these cases are few and you can't spare the time they demand nor assume the responsibility they require.

Once you are sure your patient is normal then make sure of the baby. Never fail to carefully palpate the abdomen for presentation of the fetus or possible fetuses. To overlook a transverse presentation in early labor is downright malpractice. For when the bag of waters ruptures, ideal conditions in this instance have been lost. The cord may prolapse with fetal death or the fetus becomes tightly impacted into the pelvis in this neglected presentation. Really it is discouraging to read over still-birth histories such as those in the record rooms of modern hospitals.

Breech presentation should also be watched for during abdominal and rectal examination as their mortality is high in the best clinics. Breech delivery in a multipara can be satisfactorily performed without much special training. However, breech delivery in a primipara is hazardous because that pelvis has never been tested by a fetal head. Consultation is, therefore, of help in deciding the best course for such a case. To have a consultant nearby during the delivery of a breech is wise and comforting. Lest you be guilty of neglect—always greet a woman in labor by placing your two hands on her abodmen and don't take them off until you are sure there isn't a transverse or breech presentation. If clinical examination is uncertain, resort to x-ray rather than taking foolish chances.

Disproportion between the head and pelvis has fortunately received much emphasis, so that neglected cases are not frequent. Most of the mistakes now are in the borderline group where retrospect indicates that delivery by cesarean section would have been better than a prolonged labor with brutal forceps extraction. When a primipara goes into labor the doctor should always ask himself the question, "Will this head come through?"

If mother and baby are in good condition and membranes are intact then a trial of labor can be safely attempted. However, when membranes rupture it is imperative that the decision as to mode of delivery be determined within the next few hours. If the fetal head is down in the pelvis at or below the level of the ischial spines it will deliver from below, provided the pelvic outlet is as wide as the average adult fist. This has been repeatedly demonstrated by the Hillis impression method.[1] If these conditions do not definitely exist, call a consultant. Remember that conditions are ideal at this stage, but if you misinterpret the findings, you may deny your patient a safe delivery. Unfortunately, too many doctors call a consultant in obstetrics late when they are in trouble, instead of early to keep out of trouble. Most families cannot help but realize this negligence.

X-ray Reports.—Another dangerous pitfall is over-confidence in x-ray reports. No one can deny the value of x-ray in demonstrating the fetal and pelvic characteristics. However, you must realize that a radiograph will not accurately tell which heads will deliver from below, because there are too many incalculable factors involved. If the report reads, "No apparent disproportion between head and pelvis", do not be misled. The roentgenologist only means that as far as he can determine from x-ray, there is no disproportion. In spite of the x-ray the case may still be one of disproportion, clinically, and that is what you and the patient are interested in. Let the roentgenologist and obstetrician quibble about these borderline cases, as they usually involve a prolonged tedious labor, difficult delivery and high fetal mortality. The family will gratefully acknowledge your wise judgment in forecasting these difficult cases early.

Prolonged labor is a very discouraging complication to patient, family and doctor. Seldom can it be predicted and its course is so irregular that management is a considerable problem. Tragedies to mother and baby are frequent; hence they

do not constitute a favorable group for the man in general practice. When labor persists for twenty-four hours it should be termed prolonged labor regardless of the cause. Even though the patient may be in good condition and the family satisfied, a consultant should be requested by the doctor. This shows that the doctor is not ashamed of his management and is sincere about the patient's welfare. Moreover, the responsibility in this uncertain group is immediately shifted to the trained obstetrician. He has a better chance to help you get a favorable result, as ideal conditions still exist. Too often the consultant is not called early—the patient labors on for many hours—dehydration, sepsis and exhaustion occur. The family realizes that something is wrong. They begin to lose confidence in the doctor and demand that he do something or call a consultant. When the outcome is unfavorable they blame the doctor for neglecting the patient.

Such cases may be found in abundance in the files of the average general hospitals. The adverse criticism from just a few of these cases is quite injurious to a man in general practice. Don't let these prolonged labors sneak upon you. Call them prolonged labors at twenty-four hours, and insist upon a consultant to protect yourself.

Pituitary Extract.—There have been many reports, favorable and unfavorable, about the use and abuse of posterior pituitary extract in the first stage of labor. That it has caused rupture of the uterus, fetal asphyxia and rapid expulsive delivery has been demonstrated.

Recently, its cautious use has been of value in stimulating cases of uterine inertia. However, the relative merits of so powerful and dangerous a drug are not to be decided by one occasionally doing obstetrics. Don't forget that you are risking two lives every time you administer this powerful drug in the first stage of labor.

Second Stage

Errors of the first stage are mostly those of omission, while in the second stage they are usually errors of commission.

Artificial rupture of the membranes in the delivery room is often done promiscuously. To the doctor's surprise a loop of cord may prolapse, the arm of an undiagnosed transverse or leg of an undiagnosed breech may suddenly present. Keep these accidents in mind and make sure the head is on the perineum before you rupture membranes. If one of these accidents should occur, don't lose your head and frantically do further harm; instead call for help immediately. Not infrequently an ambitious intern or doctor will see a patient brought in with a prolapsed cord or extremity and will wildly rush in to extract or do a version and extraction. These heroic attempts are usually ill-performed under poor conditions and kill more babies and mothers than they save.

Forceps Delivery.—Another mistake is to attempt forceps delivery through an incompletely dilated cervix. I refer to the men who do it accidentally, not those who do it deliberately. By so doing, the cervix may suffer laceration or annular detachment and profuse hemorrhage may follow. Before applying forceps one should always make sure the cervix is complete, rather than assuming this because the head is on the perineum. In fact, this information can be obtained at the same time that you verify the position of the fetal head. While you are tracing the course of the saggital suture to the periphery keep cervical dilatation in mind.

Never put forceps on a head for delivery no matter how low it is, until you are absolutely sure of the position. If you fail to recognize a transverse position—the usual pelvic application will leave disfiguring marks on the baby's face. Remember that the marks you leave on a baby's head are revealing evidence of your forceps application. After forceps are applied and moderate traction fails to advance the head, you had better take the forceps off and recheck the position. All these statements are simple rules taught in medical school, but are often forgotten in the excitement of a delivery room.

Large Shoulders.—An occasional baby is lost due to the dystocia of large shoulders, causing delay in delivery with fatal asphyxia. This is one complication which must be met by the doctor in charge, as there is no time to call for help. Anyone who delivers babies is bound to encounter this problem once in awhile. Therefore, this subject should be thoroughly reviewed in standard textbooks, and the pictures of the arrested shoulders studied carefully. If shoulders fail to advance with the usual pressure from above and assistance from below, don't waste further time in pulling on the head and pushing from above. Stop and quickly check the position of the anterior shoulder; if it is directly anterior or transverse tuck it into one of the oblique diameters

and try again to deliver them. If they are not disimpacted by this procedure the posterior arm should be brought forward, down and out. This breaks up the girdle of resistance and delivery follows. Rarely shoulders may be so large that a cleidotomy is necessary for delivery after the baby dies. Call a consultant for this procedure. Arrested shoulders are usually difficult to deliver, but you can succeed more often by working deliberately, yet cautiously.

Episiotomies are indicated whenever you want to avoid perineal laceration. Only the mediolateral type is uniformly safe, as the midline type will often extend into or around the rectum, making the repair complicated. Use the least amount of catgut for best results.

Third Stage

Don't succumb to the strong temptation to meddle with delivery of the placenta. Recently, ergonovine intravenously with the shoulders has become a popular method of rapid placental expulsion. Only the obstetrician should try these new methods, as accidents may occur. An undiagnosed twin may still be in the uterus. Ill-timing may cause placental incarceration requiring manual removal. Routine use of posterior pituitary extract subcutaneously after delivery of the baby seems to safely shorten the third stage, thereby decreasing the blood loss. To have ergonovine ready for immediate intravenous use is excellent prophylaxis for post partum hemorrhage.

Post partum hemmorrhage is a constant threat to even the seemingly normal cases. The best method of immediately stopping a post partum hemorrhage is to firmly press the cervix against the symphysis (vaginal hand) and then sharply anti-flex the corpus (abdominal hand). Meanwhile, intravenous ergonovine should be given by an assistant. A sample of the blood is caught in a tube and sent for typing in the blood bank, while glucose is started before the veins collapse. Any clear-thinking physician can perform these important preliminaries while a consultant is being called to the scene.

Every physician who walks into a delivery room should have such a procedure mentally outlined to avoid confusion and wasteful fumbling. When a woman is bleeding profusely her doctor must think straight and act deliberately if he is to save her life.

Axioms for Ideal Obstetrics

1. Many of the common mistakes which cause fetal and material mortality are avoidable.
2. Ninety per cent of women deliver normally if allowed to; therefore, avoid that dangerous ten per cent by learning to distinguish normal from abnormal.
3. A woman who cramps and spots is an ectopic until proven otherwise.
4. If you first classify an abortion, the treatment is then standard.
5. Never meddle with women who bleed in the last trimester. They are abnormal cases.
6. Verify fetal presentation early, as breech and transverse may get you into trouble.
7. The question in every primiparous labor is, "Will the head come through the pelvis?"
8. Any labor of twenty-four hours or more is prolonged and belongs in the abnormal group.
9. Never use posterior pituitary substance in the first stage of labor.
10. Do not rupture membranes promiscuously.
11. Abuse with the forceps leaves a telling mark.
12. Learn to deliver impacted shoulders as there is no time for consultation.
13. Be prepared for post partum hemorrhage as the warning is brief.
14. Obtain the advice of a consultant early to keep out of trouble. Don't wait until you are in trouble to ask him to share the blame of mismanagement.

Doctors in general practice can perform an excellent brand of normal obstetrics. However, to do so they must be constantly alert to pick out the abnormal cases. These simple axioms should serve to avoid many of the common mistakes noted in the average general hospital.

Reference

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Elimination of overheating and maintenance of better conditions of relative humidity in dwellings and office buildings should also effectively reduce current morbidity from infections of the upper respiratory tract. Perhaps fuel-oil rationing may in the long run prove to be more of a blessing than a hardship. It is even conceivable that the "short and simple flannels of the poor," and the scant and flimsy, sometimes even nonexistent, unmentionables of the frailer vessel may give way to comfort and woolies, fewer head colds, and lower doctor bills.—Editorial *N. Y. State Jour. of Med.* Dec. 1, 1942.

Transplantation of Preserved Tissue in Ophthalmic Surgery*

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Transplantation of preserved tissue in ophthalmic surgery has been practiced for nearly forty years. More thought has been given to it recently, especially in work with the cornea and fascia. True transplantation most likely does not take place, but a replacement, with the graft acting as a supporting membrane.

Heterogenous grafts of cornea, bone, cartilage and fascia, preserved in various media, have been employed in eye surgery. Recently, transplantation of cornea from different species has been revived, with contradictory results. Little has been done with conjunctiva.

Progress of the author's experimental research with preserved, heterogenous conjunctiva on rabbits and monkeys will be discussed in this presentation.

■ TRANSPLANTATION of preserved tissue has been attempted for many years. However, the first attempt at transplantation of preserved tissue in eye surgery that I have been able to find in the literature was when Salzer[21] reported having taken horse's cornea preserved in formalin, washed out in normal saline for 24 hours and then transplanted into the eye of a rabbit, blending with the surrounding tissue and gradually becoming clearer instead of more opaque. He had exhibited a rabbit which had had both eyes operated, before the Morphological Society in Munich[22] and sections of these eyes, after a period of seventeen months, in Heidelberg. Absorbtion did not appear clinically until fifteen months after the operation; and the graft had disappeared entirely seventeen months after the operation (Heidelberg, 1910).

A section after seven months showed the central part to be a homogenous mass; but the periphery and bottom, next to the cornea proper, showed a blending, with corneal cells. After seventeen months the cells were, seemingly, without nuclei and more compact than the surrounding tissue, but showing definitely, the lamellar construction. There was an increase of nuclei in the surroundings. He feels that reports like those of von Hippel and Proeller were not observed long enough (after a few weeks or months). He also includes the experiments of Magitot. These were all partial transplants, not through-and-through grafts. He tries to disprove Magitot's assertion, and rightly so, that the substantia of the transplant lives. He himself is sure that the graft acts only as a framework for wandering cells from the corneal sides and from beneath.

Magitot[15] reported the use of cornea preserved in Locke's solution, then transferred to hemolyzed blood serum and kept at 5° C. He was able to keep these tissues alive for as long as one week; the graft to which he refers came from an eye which had had a marked glaucoma. This, too, was only a partial graft, going only as far as Descemet's membrane. Incidentally, at this early time, Magitot referred to the use of cornea from still-born infants as a possible source of material. In 1926 Kopponyi and Byfield[9] used the mesentery in a transplant on a rabbit's cornea, and with apparent success. From the description, however, it was difficult to ascertain whether this was a through-and-through corneal graft, or one of only partial depth; the graft did not become transparent.

Most of the work since then has been with the idea of confirming or disproving Salzer's original concept. He was firmly convinced that the graft acted only as a guiding structure for the ingrowth of new tissue from the cornea of the recipient. In other words, it was not a matter of transplantation, but one of replacement or regeneration. This is in keeping with the later version of McCallum[14] and others which we will discuss later, who states:

"It is important to observe that in some cases, as in transplantation of bones and nerves, the graft may survive only as a sort of splint which supports and guides the new growth of tissue from the host, which finally absorbs and replaces it entirely."

In recent years, many men have used cold to preserve the cornea, advocated chiefly by Filatov[4] and since followed by many others. They use temperatures of from 2° to 3° to preserve the cornea, the eye being kept in Ringer's solution

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or normal saline. These grafts must be used within a few days, at the most. Testing the vitality by tissue culture, Filatov and Bajonova,[6] preserving the cornea at 2° C. to verify the vitality of dried cornea of the rabbit, found that with the loss of 76.3 per cent of its initial weight, the cornea is capable of growing; in other words, preserves its vitality. Cornea preserved in this way must be used within a very short time. There must be some other factor other than loss of water, for Busse-Grawitz[2] has enclosed sections of mummy muscle and other tissue in a collodion wrapping, tied each end; then dipped in fluid collodion. He found that cells regenerate and multiply. Tissue from one mummy was from the first dynasty, 5300 years old.

Thomas[25] used scleral tissue to replace the whole thickness of the cornea and found that after a period of about two years, the grafts developed epithelium and endothelium from the host. They also became less opaque. He thought that this was due to the increase in vascularity. To this I cannot subscribe, for my experience has been that the less vascularity we found in the host, the more favorable the prognosis for a satisfactory result with clear cornea. Thomas also transplanted cornea which had been boiled in oil and found that, although the graft adhered, it remained opaque. This also fits in with Salzer's premise that the graft merely acts as a framework for new tissue to come in and replace it.

Petrosiantz,[19] in a study of what he terms "Conserved Cadaver Eyes," used the slit-lamp to study daily corneal changes of eyes kept at temperatures of 2 to 4° C. He found that the epithelium becomes opaque, irregular and edematous by the seventh day; by the fifteenth day the cornea is only semitransparent and by the twentieth to twenty-fifth day it is completely opaque. The clinical data following the use of this tissue prompted the conclusion that the foregoing changes in the clarity of the cornea and the regularity of the epithelium have, apparently, no effect on the transplant. This is of particular interest; for formalinized cornea, or those preserved in other fluids, are quite opaque.

Loehlein[13] was probably responsible for much of the renewed interest in the use of formalinized cornea. He agrees with Salzer "that one does not expect a survival of the transplant but a gradual displacement by surrounding tissue." This included a report of two humans in which formalinized cornea was used. One of these was a bilateral transplant. One eye utilizing fresh cornea; the other, formalinized fixed cornea. The result in the latter was better than the one in which fresh cornea was used. Elschnig, in discussing this paper, agreed that the transplant must be replaced by new growths of corneal tissue. The work of Rosenbaum and myself,[29] which was begun before the publication of Loehlein's paper; and since this, Scherschewskaya[23] reporting the experimental results of operations on thirty-seven rabbits with healing in twelve, or 32 per cent, are of interest. He reported one glimmering, three transparent and eight opaque results. He kept the cornea in 4 per cent formalin for four days and then allowed it to stay in Ringer's solution for four more days, changing the Ringer's daily. He finds that there is no more tissue reaction to formalinized grafts than to the fresh transplant. He also subscribes to the findings of Salzer, as previously discussed; and also in regard to the long time it takes for the resorption of the graft and for its replacement through regeneration. Other investigators, including Ascher, Weidenreich and Bussaca are quoted by Scherschewskaya as furnishing encouraging results in this line of endeavor. Deutman[4] published the results obtained in the transplantation of formalinized cornea in five rabbits, in which all of the grafts took and healed well with less reaction than when living cornea was used. After observing over a period of three to eleven months, none of the grafts was clear, the opacities being located chiefly in the posterior parenchyma.

With Salzer's work as a foundation, Rosenbaum and I decided to attempt perforating grafts, using formalinized cornea. The basis for the use of fixatives in preserving tissue is that it kills living cells by stopping enzymatic processes associated with life; and also, that it coagulates protein. Formalin, used here in 10 per cent solution, is probably the most widely used fixative and was the one used by Salzer; which was the reason that we began our experiments with it. In one group of rabbits an attempt was made to graft formalinized dog cornea. The cornea was removed from the eye of a dog that had been killed in the surgical laboratory and the tissue immediately dropped into the formalin, where it was kept for from seven to twenty-eight days;

or, until the day preceding the operation. Twenty-four hours before it was to be used it was washed with running tap water until just a few minutes before the operation, when it was transferred to sterile saline. One dog's cornea was used for four different grafts, a single quadrant being used each week. In this way some idea of the optimum time of fixation might be gained. Five rabbits were operated, using this type of tissue. In four the graft remained in place; in the other it was expelled following an infection. None of these grafts became clear, even over a period of one year's observation. There was a moderate amount of postoperative reaction, only slightly more so than that following rabbit-to-rabbit grafts of similarly treated tissue. Vascularization began within a week to ten days, reached its peak in about two weeks and then gradually subsided. The length of time the cornea had been kept in the formalin solution seemed to make no difference.

In the second group in which formalinized cornea from the rabbit was used, one of the four rabbits became infected and the graft was lost. The others healed promptly. To reduce the amount of reaction, the method of washing the cornea was changed, washing with water that had been passed through a Berkefeld filter. Five rabbits were used in this group, only one of which became mildly infected; not enough, however, to result in sloughing off of the graft. The reaction was less than where dog's cornea had been used and the transplants washed with water passed over the Berkefeld filter showed less swelling and redness than the others. Of the nine grafts in this group, seven healed well. Anterior synechiæ developed in three cases; in one, the iris was attached to the transplant; in the other two the iris was adherent to the wound at the upper limbus. Three grafts in this group were definitely clearing at the time of the report. We tried Petrunkowitsch solution, thinking that possibly the method of fixation might play some part in the opacity of the grafts. There did not seem to be any difference in the opacity of the graft or in the progress of the healing. The method of operative procedure was that used by Dr. Alvis and myself,[28] using the Wiener corneal punch. A histological report of one of these, made by Dr. Harvey Lamb, follows:

"Microscopic examination of dog's corneal transplant to the rabbit's cornea, one year postoperatively, presents a perfectly smooth union of the adjoining surfaces. The thickness of the transplant is a little greater than over the remainder of the cornea. This change of thickness is not abrupt, but gradual. Just beyond the end of the transplant, that part of the cornea farther from the corneo-scleral junction, is somewhat thicker than the corresponding part of the cornea on the opposite side. The anterior epithelium of the cornea proceeds smoothly and unaffected from the surrounding rabbit's cornea over the surface of the transplant. Bowman's membrane is not present in dogs or rabbits' eyes. The individual lamellæ of the substantia propria have joined smoothly, end to end, although at one side with the formation of a sharp angulation, or wave.

"The limits of the corneal transplant are shown only by the break in Descemet's membrane. On one side, the end of Descemet's membrane belonging to the surrounding rabbit's cornea is turned anteriorly a little; on this side, a second thickness of Descemet's membrane lies peripheral for quite a distance from the transplant, just behind Descemet's membrane of the host. This second layer of Descemet's membrane has probably been derived from loose posterior endothelium of the dog's transplant. On the opposite side of the transplant Descemet's membrane gradually thins out and disappears before the rabbit's cornea is reached. Just beyond the end of the transplant on this side and behind the rabbit's cornea, the absence of Descemet's membrane continues for a short distance, and the posterior endothelium is considerably degenerated here. In the dog's transplanted cornea the anterior epithelium is irregular in thickness, and the epithelial cells under the superficial flattened cells of the anterior epithelium are very irregular in arrangement. Anteriorly in the dog's transplant and in the adjacent rabbit's cornea on the side nearer the sclero-corneal junction, the corneal corpuscles present mild degeneration with the formation of a few microphages."

A microscopic section of one of the better rabbit-to-rabbit grafts, nine months postoperative, was also made by Dr. Lamb, with the report as follows:

"The formalinized corneal transplant is a little thicker than the surrounding cornea. The anterior epithelium of the host is smoothly continuous with that over the transplant. The lifting of the epithelium, in places, over the transplant is an artifact, being also observed over the surrounding fixed part of the cornea. The thickness of the anterior epithelium is of good, normal degree over the transplant.

"The lamellæ of the substantia propria meet well end to end at the line of junction between the transplant and the cornea of the host. The individual lamellæ throughout the transplant and surrounding cornea have the same thickness and the same good staining of the corneal corpuscles. A few small capillaries are present between the anterior lamellæ of the corneal transplant and that part of the host nearer the sclero-corneal junction. No additional posterior endothelium or Descemet's membrane is present behind the transplant itself."

It is my belief that the difference in results between the use of dog's cornea and rabbit-to-rabbit transplant is not due to any inherent dissimilitude in structure or otherwise between the two, but solely to the difference in thickness of the grafts; the dog graft being thicker than that of the rabbit. It seems desirable to have the cornea of the donor and that of the host as nearly as possible the same thickness. The time required to attain the ultimate result is long, as has been repeatedly stated by Salzer, who has often admonished many of the researchers on corneal transplantation for having made their claims too soon. It stands to reason that the more nearly the donor graft, even though it be preserved, approaches all of the characteristics of the tissue of the host, the better will be the final result, for the reason that, physically, it will be easier for the cells from the surrounding tissue to wander in.

As to the changes in the epithelium, these correspond to those I found in my experiments on regeneration of the cornea[27] on rabbits and other animals. While the epithelium would cover the entire cornea from the surrounding periphery and gradually assume the characteristics of the normal epithelium, the columnar epithelium never did take on the regularity and distinctive peculiarities of the normal cornea, after months, or even after years following its removal. I was never able to find mitotic figures in the cornea proper. This fits in with the theory that the corneal corpuscles wander in from the side. Nageotte,[17] although not working with transplantation, believed that the cornea may become invaded with leukocytes, which are not to be distinguished from normal cells of the cornea, and that they take on the appearance, function and activity of corneal corpuscles, from which they cannot be differentiated.

Hildreth,[7] using the work of Koontz[8] as a basis, used ox fascia, prepared and marketed in a sealed ampule, as a substitute for fresh fascia lata from the patient, in performing Lexer's operation for ptosis. He finds the preserved fascia strong and does not act as a foreign body; nor does it induce lid deformity. Koontz had used alcohol prepared ox fascia to repair defects in the stomach, bladder and intestines. This had been tried by Neuhoff, in 1917, with live fascia, but was absorbed by the stomach and digested; this did not happen if gastro-enterostomy were performed, thus removing foreign protein reaction which prevents the successful employment of living, heterogenous grafts. Koontz prevented the digestion in the stomach by giving bismuth-subnitrate by mouth. Nageotte's conception of the collagen fibers of the connective tissue as inert, nonliving substances, led him to the use of dead tendon grafts for the repair of anatomic defects in living tendons, in 1917. The fundamental, biological mechanism may be stated as follows: The dead cells are carried away by the wandering cells of the host. Fibroblasts from the host unite with the framework of the graft and a new vascular network is installed. The fibers of the graft do not act as a foreign body, produce phagocytosis or show a tendency to be absorbed, because they have not been altered, either chemically, or by their preservation in the alcohol. They are similar, in every way, to like fibers of the host among which they are implanted. Alcohol-preserved fascia from other individuals or animals can be used with impunity, because alcohol destroys antigen and therefore does not get the foreign protein reaction that might be expected if a piece of living ox fascia were implanted in another species. To repeat:

> "The collagen fibers of the connective tissue are inert, intercellular substances and are not alive in the sense that living protoplasm is alive. The preservation of these fibrils in alcohol does not change them, either chemically or physically, as the connective tissue fibrils of catgut are changed in the course of its preparation; physically, by the use of heat and chemically, by chromic acid or iodine. When the ox fascia fibers are taken out of the alcohol and washed in salt solution, the collagen fibers are unaltered when implanted in the host, new cells wander in from the surrounding tissues and repopulate the implanted fibers, fibroblasts and blood vessels grow in, and soon the implanted fascia is a living part of the organism into which it has been implanted. There is no leukocyte or round cell reaction as in the case of catgut or kangaroo tendon and hence, no tendency to absorption."

Other preservatives besides formalin and alcohol have been used for transplanting tissue. O'Connor[18] used refrigerated cartilage isografts after having been preserved in merthothiolate and used successfully after a period as late as two years after preservation. The cartilage is not materially changed by preservation and maintains its identity indefinitely after grafting. The method used was that recommended by Morgan, Jamison and Powell.[16] The cartilage is obtained under

sterile or unsterile conditions, stripped of its perichondrium, then thoroughly washed with tap-water to remove blood and placed in a sterile glass container and covered with a solution of one part of aqueous merthiolate (1-1000) to four parts sterile normal saline. The solution should completely cover all of the cartilage by at least one inch. The container is covered and placed in a refrigerator. Cartilage thus preserved can be used to repair defects in the orbital rim, or to fill in the cavity enclosed by the capsule of Tenon after enucleation, providing the cavity is clean.

Plastic repair of conjunctival defects with fetal membranes has been recommended by de Roetth,[3] but these were fresh tissues and preservatives had not been used. He obtained the membranes by cesarean section and kept them in tepid Locke's solution. One to fifteen hours elapsed before use. He operated on six cases of symblepharon and two for enlargement of the socket. The membranes took in every case. For five weeks they showed no change. In the next weeks the grafts shrunk and ten weeks after the operation seemed to have disappeared; but there was always more fornix left than before the operation. The shrinkage was extensive, but the membrane seemed to have changed to conjunctiva. In one case of symblepharon due to phenol, there seemed to be little shrinkage. His conclusions were:

(1) The embryonal tissue used has a property of being transferred to conjunctiva. The epithelium of the membranes excised two and four months after transplantation showed the same histological structure as the bulbar conjunctiva.

(2) In the successful case, the course of the vessels in the graft was like that of the normal conjunctiva.

(3) Result in shiny, transparent tissue. "Whether graft itself or replacement, I do not know." He quotes Burger[1] as having used fetal membrane to line an artificially formed vagina.

A little over a year and a half ago Dr. Orwyn Ellis and I made a preliminary report before the Los Angeles County Medical Society on some experimental work we had been doing on rabbits and monkeys with preserved, conjunctival grafts. The research was begun in the Spring of 1941 with the coöperation and facilities of the University of Southern California School of Medicine and has been continued since in the research laboratory of the Zoölogical Hospital of San Diego and the Oscar Johnson Institute, of St. Louis. The object was to try out specially prepared heterogenous and autogenous grafts of conjunctiva with the object of using the method, if successful, for replacing lost bulbar and palpebral conjunctiva in man.

Technique

The method of preparing the conjunctiva for implantation was as follows: Large pieces of conjunctiva were carefully dissected from freshly obtained cows' eyes, as free from subconjunctival tissue as possible. These were stretched over thin slabs of cork and placed in formalin solution, 4 per cent. Twenty-four hours before using the tissue it was removed from the formalin solution and washed in running tap-water for twenty-four hours, then transferred to normal saline solution, where it was kept for a half hour. This latter procedure was repeated 8 times. The first experiments were carried out on rabbits under intravenous and local anesthesia. The upper conjunctival cul-de-sac was then excised, including fornix, bulbar and palpebral conjunctiva. A previously prepared piece of dentist's molding material, shaped to fit the entire cul-de-sac with a piece of the center cut out to prevent injury to the cornea, was then taken from the sterilizing solution and the top half covered with the prepared conjunctiva. The smooth side covered the molding material so that the rough side would be in contact with the denuded, upper cul-de-sac surface. A preliminary canthotomy having been done sometimes, so as to facilitate the easy insertion of the graft-covered mold, as well as previously placed sutures with which to close the lids, the mold was carefully inserted under the lids and the sutures tied, thus sealing the lids and holding the graft firmly in place.

A week later, the sutures which had not already become loose were removed and the molding material taken out. It was observed at this time that the new conjunctival implant was firmly adherent to the underlying structures and, when it was forcibly removed a raw, oozing, granulating surface was found underneath. By the use of this implant the conjunctiva seemed to have been restored to its previous condition and took on the gross appearance of normal conjunctival tissue.

Controls were run, using the molding material without any conjunctival implant, as well as hav-

ing used neither, after having removed the conjunctiva from the upper cul-de-sac as described above. While the controls healed less rapidly, with a smaller sulcus resulting, the difference was not great. It was also found most difficult to remove the conjunctiva and produce a symblepharon by burning with the actual or electrocautery. In these cases the cul-de-sac was restored almost completely, using neither mold nor graft, delayed healing being the only feature observed. We felt that final judgment must be deferred until we had produced a complete symblepharon first before trying the graft to restore the cul-de-sac.

A complete symblepharon was finally produced at will in the monkeys with the use of concentrated lye, applied to the conjunctival surface and immediately brushed off with a sponge and then washed out with a solution of boric acid. It was easier to accomplish this in the rhesus monkey eyes, since they seemed to have less regenerative power than those of the rabbits. Two such cases are now under observation at the Zoölogical Hospital in San Diego. In the first, where a complete symblepharon of the lower lid was achieved, the scar covering the entire lower half of the cornea, the graft was placed over the molding material, as above described and held in place by means of the previously placed lid stitches, which were removed five days later. The entire cornea was steamy, the pupil being barely visible. This rapidly cleared so that within a period of two weeks, an examination, without means of magnification, revealed it to be perfectly clear in the upper half and almost so in the lower, where the adhesion had been dissected away. The graft was firmly adherent at the time of removal of the mold, while neither the eye nor the lids showed undue signs of swelling or irritation. The conjunctival cul-de-sac, at this time (six weeks later) appears no different than that of the other eye and is of the same depth.

In operating on the second monkey, instead of placing the molding material in the cul-de-sac with the graft wrapped around it, a stitch was placed in each of four corners of the prepared graft, having first relieved the symblepharon, as in the first case, by careful dissection. The four stitches were then placed in corresponding points of the edges of the conjunctiva of the host and tied, the remaining edges being approximated with a continuous, running stitch. The piece of preserved conjunctiva was first trimmed so that it would be about 20 per cent larger than the area of the prepared surface which it was to cover. Finally, two double-armed sutures were placed in the bottom of the sulcus and brought out on the skin surface at a point corresponding to the lower border of the orbit and tied over a small glove button. The healing in this case was even more rapid than that of the first monkey, with no apparent irritation or swelling, the animal being able to keep his eye open at all times. Four weeks later the new cul-de-sac looked like that of the other eye. Other similar experiments are in progress, with the same, or similar procedures, and will be reported at a later date. Controls will also be run, although we have already discovered that the monkeys have not near the regenerative power of the rabbit, but very much more than that of man.

In addition to transplanting the preserved conjunctiva to replace that of the fornix in rabbits and monkeys, we buried dog's conjunctiva, preserved in alcohol, after having been stretched across a piece of cork and floated, conjunctiva down, in the 95 per cent alcohol. For thin tissue like the conjunctiva, this works equally as well as formalin and can be washed out very much more easily than the formalin, requiring only a few minutes to free the alcohol. The tissue is equally well preserved. For the cornea it will not do, as it distorts it and shrinks it too much.

A piece of dog's conjunctiva was buried under the skin of a rabbit's belly. After five days, it was removed. Externally, before removal, there was no noticeable reaction and no swelling of the outside skin. The wound was opened and the buried piece of prepared conjunctiva prepared for section. Dr. Frank McDowell, Department of Surgery, Washington University School of Medicine, prepared and examined the slides. He reported that slide No. 45 from this graft showed much the same changes as his homografts; i.e., early round cell infiltration with some small amount of exudation. Those of a similarly buried transplant, removed after a period of three and one-half weeks, show excessive exudation and beginning destruction and digestion. In some places, there appeared to be replacement with fibrous tissue. In fact, even at this date, he could not be sure that any epithelium remained. This is not at all surprising, in view of the work on tissue transplantation done by Leo Loeb,[11] Sie-

vert[12] and many others. Loeb felt that it was possible that the tissue fluids of the host have a directly harmful effect on the transplanted structure. Also, that increased bacterial activity, due to lowered resistance, played a part, injuring the epithelium. He found that the hair follicles were better protected against this action than the rest of the epithelium. Some of the epithelial cells, even in the heterogenous tissue, start to grow, but soon deteriorate and die off. The closer the relation to the host tissue, the more chance the cells have to live. This means that autogenous grafts grow best, and the farther away from the original species, the less chance for life. In his article on "Individuality Differential and the Reactions against Transplanted Tissues," he states that the similarity or difference in the character of the individuality—race and species—differentials between host and transplant determines the reaction of the host against the transplant in the case of normal tissues as well as of tumors; and, in addition, it determines the active immunity against tumor growth. In this differential he uses a simile which he calls "A spectrum of differentials," which he compares with the colors of the optical spectrum. Since each differential is genetically composed of multiple factors, and no definite statement can be made as to their number, it is possible that the totality of the chromosomes, with the exception of the sex chromosome, participate in the composition of the differentials. He considers the lymphocytic reaction the most sensitive reaction for the detection of biochemical differences so far discovered. The smaller the difference between the differentials of host and transplant the later will be the date of the appearance of the reaction. It seems as if the dissimilarity between the two differentials leads to the development of the syngenesio-homoio-race and heterotoxins which are directly responsible for the reaction on the part of the connective tissue and lymphocytes, as well as the interference with complete vascularization. This had been shown by work of Loeb and Addison[12] in their previous experiments, concluding that there exists a difference between the adequacy of different species as a soil for epithelium of the guinea-pig, and that the more nearly related the two species are, the better will be the growth of the transplanted epithelium. They therefore arranged the species in the following order, indicating the gradual decrease in the adequacy of the soil for transplanted guinea-pig skin: (1) guinea-pig; (2) rabbit; (3) dog; (4) pigeon; (5) frog.

All of these factors are eliminated, however, with the transplantation of preserved tissue, since the changes brought about by the use of the preserving fluid eliminates the biochemical factor. However, there is something more to be taken into consideration, which is the fact that all cells are killed by the preserving process and we do not have even a start of growth of epithelium. We know, for example, that we can imbed autogenous skin transplants, burying them under the surface (Esser inlays) and secure takes in them, almost 100 per cent. We are also able to do this with autogenous mucous implants. Here, however, we have the living epithelium to deal with, which gets its nourishment from the underlying tissue of the same host, and therefore having the same differentials as the transplant, hence producing practically no abnormal tissue reactions. When we begin to use preserved tissue for transplantation, we have only dead cells to deal with and must therefore depend on the ingrowth of similar cells from the surrounding tissue of the host. This takes place in the case of the connective tissue cells; but, unless we have epithelial cells to grow into the transplant from the surrounding tissue, the result is bound to be a failure, from a practical standpoint, since epithelial cells reproduce only epithelial cells, connective tissue only connective tissue cells, etc., etc., as found by Thygesson[26] in his experiments with tissue culture in vitro of human epithelium, regardless of whether the tissue were taken from fetuses, stillborn or adults. Therefore it stands to reason that, since we know that we can transplant preserved cornea and that the epithelium will be replaced by cells from the epithelium of the surrounding host, there is no reason why we cannot conjecture that the epithelium from transplanted, preserved conjunctiva will not be restored in the same way from the edges of the normally remaining conjunctiva. This necessarily presupposes that the edges of the contacting host must retain normal conjunctival epithelium or normal cornea; otherwise, the whole theory falls to the ground.

Recently, Rozentsveyg,[20] Sie-Boen-Lian,[24] Langer[10] and Zeulsina[30] have reported transplantation of preserved conjunctiva from the cadaver for replacement in scars, burns and trachomatous pannus, but this tissue was kept in a cooler and

contained live cells when used, so that it does not apply here.

Conclusion

In conclusion, we believe that there is not only a possibility but a probability that preserved, heterogenous implants may prove of value in plastic surgery wherever mucous membrane is needed. This applies, not only to the use of mucous membrane for the eye and socket, but to surgery in general, wherever mucous grafts are indicated. Our experiments, however, will be limited to conjunctival grafts for eye surgery. We can visualize the use of prepared conjunctival tissue for eye surgery, just as prepared fascia and cartilage are used today; and we hope to include, in a final report, the use of these implants to restore the sulcus after symblepharon, or to prevent adhesions from chemical and other burns of the eye.

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The Challenge of 1943

The year 1943 offers a challenge to every Michigan physician who remains in private practice. Thirty per cent of our doctors are in military service and before the year is ended others may be taken. This throws an additional load upon each of us and leaves some areas with very few remaining doctors of medicine. How we serve our patients during this critical period will perhaps determine the future of the practice of medicine.

Certain forces in our national government would solve their problems by regimenting us and by distributing the available physicians wherever there seems to be a need. They would completely ignore a vital factor in the treatment of the sick: confidence in and reliance on one's own doctor—and they would ruthlessly destroy the family-patient-physician relationship. They would supplant the medical agents in our towns and cities by allowing inferiorly trained men to care for our people, but would refuse to use them in the military services. They would turn the direction and, in some areas, the actual practice of medicine over to men trained only in the public health sciences.

None of these things must happen. We must guard zealously all of the gains made by scientific medicine during recent years. Our colleagues in the services are depending upon us to maintain our present position and to so serve our people that no demands for change will be made.

W. H. Cummings

President, Michigan State Medical Society

President's



Page

EDITORIAL

STAMPS AND BONDS

■ This has been said repeatedly, and stressed over the radio and in the press, but it will bear repeating: This is *our* war as well as the other fellow's. Most of us have some very close friends or relatives in it. We cannot afford to let them down. Our bit is to buy stamps and war bonds. Ten per cent of income has been fixed as a minimum. Have we bought them? and why stop at ten per cent? An all-out effort calls for all we can do.

Buy them for an investment on an annuity basis.

WAR AND SALVAGE

■ To move every pound of critically-needed waste materials into the channels for the manufacture of implements of war, is the over-all objective of the Salvage Branch of the Conservation Division, WPB. To make every man, woman and child in America conscious of this need, and to secure the active coöperation of every American to "get in all the scrap—NOW," is equally important.

The present immediate objective is to urge and assist the executive management of every industrial establishment in the country to locate, classify and move into war production channels all dormant and production scrap in their possession as speedily as possible. "Dormant" scrap is defined as obsolete machinery, tools, equipment, dies, jigs, fixtures, etc., which are incapable of current or future use in the war production effort because they are broken, worn-out, irreparable, dismantled or in need of unavailable parts necessary to practical reëmployment.

Scrap of all sorts, especially metal and rubber, is needed to make war materials and to keep the steel and other industries busy. Practically every doctor still has some old rubber equipment or broken or discarded instruments. Surgical Instruments are made of the best of steel and will work into the machines of war very satisfactorily. It is our duty as well as our privilege to turn this material into the scrap heap.

LOWERED MEDICAL STANDARDS

■ In the Fall a communication was sent by the office of Emergency Management War Man Power Commission to the Executive Committee of the Council Michigan State Medical Society suggesting that temporarily the qualifications to obtain licenses to practice medicine in some of the western states be relaxed in order to provide for the care of the civilian and industrial medical needs which was alleged to be inadequate. The Executive Committee considered and frowned upon the suggestion. They felt there were still enough available doctors and that standards now set should not be lowered.

In Chicago at the conference of State Secretaries and Editors November 20 and 21, several of the representatives of government suggested that the needs of civilian and industrial medicine demanded provision be made so that refugee physicians and graduates of substandard schools could be given permits to practice in the various states. A resolution putting the conference on record as favoring that move was introduced and tabled after a sharp discussion.

Within a week of returning from that meeting the form of a bill drafted to accomplish just that suspension of requirements came to our desk. The source of the proposed bill is only surmised, but it is drawn so as to fit any state, and have certain wording made to apply in the particular state selecting to be the guinea pig. The proposed bill and submitted argument read as follows:

INTERPRETIVE SUMMARY

A. It is becoming increasingly difficult to give medical service to considerable portions of the population in states where large industrial communities have sprung up suddenly or where large numbers of physicians have been withdrawn for the armed services. In many of the states there existed even prior to the war too few physicians for the population. Now, due to enlistments, the ratio of physicians to population is extremely low, to the point, in fact, where it will be relatively difficult even to relocate physicians within individual states without depleting other areas in those states.

There are approximately 176,000 physicians in the United States, of which only an estimated 129,000 were in active private practice prior to the war. By October, 1942, approximately 40,000 physicians were enrolled

in the Army and Navy, or 95 per cent of the quota of 42,000 physicians required this year. There remained in private practice on September 1, 1942, approximately 99,000. It is estimated that, on October 15, there were 28 states which showed a physician-to-population ratio of less than 1 to 1,500.

There are approximately 400 critical areas in the United States where there is a serious shortage of physicians. In some instances it will be possible to relocate physicians within the State where there are needs for increased medical care. In other instances, it will be necessary to traverse State lines in order to obtain services of needed physicians.

This Act authorizes doctors, dentists, and registered nurses from other States to practice, during the effective date of the bill, in any State enacting the legislation. Section 1 is statement of purpose. Section 2 empowers the proper State official to direct the appropriate licensing officer or bodies of the State to issue temporary emergency certificates to such physicians, dentists, and registered nurses, licensed as such outside the State, as are believed qualified to practice during the emergency. No license fee is to be charged for the issuance of an emergency certificate.

PROPOSED BILL

Out-of-State Physicians, Dentists and Nurses Act

B. (Title. It should conform to State requirement. The following is a suggestion, "An Act to provide for the temporary admission to practice of physicians, dentists and registered nurses to protect the health of the civilian population during the war emergency period.")

(Be it enacted * * *)

Section 1. Statement of Purpose. (The Legislature finds that a serious public emergency exists in this State because of the demands of the armed services for physicians, dentists and registered nurses and that there is a necessity for coöperation on the part of the State, with such federal agencies, as Procurement and Assignment Service for Physicians, Dentists and Veterinarians of the War Man Power Commission which have been established and are functioning in coöperation with the several States to the end that temporary relocation of physicians, dentists and registered nurses may be effected to overcome acute shortages in specific localities from time to time. Recognizing the existence of such emergency, the Legislature deems it wise, for the protection of the health and welfare of the people of the State to give to the (Governor) (State Defense Council)* the power to provide for the temporary admission to practice in the state of physicians, dentists and registered nurses licensed as such outside the State upon conditions and under regulations prescribed by it notwithstanding the provisions of the law governing the examination, certification and licensing of out-of-state practitioners.

Section 2. Temporary Admission to Practice Medicine, Dentistry and Nursing. To accomplish the purpose set forth in Section 1, and notwithstanding any inconsistent provision of law, and the (Governor) (State Defense Council)* shall have power, by general regulations or specific order, to direct the appropriate licensing officers or bodies of the State to issue temporary emergency certificates to such physicians, dentists and registered nurses, licensed as such outside the State, as the (Governor) (State Defense Council)* shall believe qualified to practice as such in the state during such emergency. The holder of any such temporary emergency certificate shall be privileged during the term specified therein, unless sooner revoked, to practice his profession within the State subject, however, to all laws of the State generally applicable to the practice of such profession and to such regulations, restrictions, and area limitations as the (Governor) (State Defense Council)* may make or impose as to them or any of them and their practice within the State. No license fee shall be required by the State for the issuance of such certificates or practice thereunder.

Section 3. Effective Date; Termination. (See Section 8 of Emergency Statutory Suspension Act.)

*Substitute any state officer or body of officers and bodies that the respective states think best.

These arguments advanced in favor of the bill are as insidious and convincing as possible. They remind us of the careful build-up placing the Medical Profession on the defensive preceding Thurman Arnold's attack and indictments under the Sherman Anti-trust Law. We are now seeing articles in magazines and press insinuating that the shortage of doctors could be solved except for the "opposition" of Medicine itself. Witness: *Harpers,* November; *Saturday Evening Post,* December 12; *New York Times,* December 9, and many others.

Effects of Temporary Licenses

Granting of Temporary Licenses would throw the doors wide open for the refugees that have flocked into the eastern states, and for the graduates of substandard schools, to come to Michigan and get established while our confreres are in the armed forces fighting for the defense of many of these refugees and for us.

Years have been needed to build up the standards of American Medicine and no one, doctor or patient, would wish to return to what we have laboriously outgrown. The lowering of standards by admissions of graduates of schools not up to American standards would be a long step backwards. Temporary licenses will be opening wedges for permanent ones. After these men have become established they will never be turned out. The American people are too tolerant to again "disrupt the lives of those most unfor-

tunate ones who have been run out of their homes and who were so kind and considerate as to come to our midst in our time of need (too few doctors left in practice), and who now that the war emergency is over should not again be driven out." Presto! The American standard has been diluted. Our surveys in Michigan show no great needs exist. There are some localities where the doctors are rather thinly spread but approximately 20 to 30 doctors would fill our present needs. These could be transferred from Detroit if an appeal would be made to doctors there not too well satisfied with their present opportunities.

This measure will undoubtedly be introduced into the legislature that will be in session when this writing is published. In defense of our brothers in the service, and to protect the public from the avalanch of doctors less well prepared, and even without the grace of citizenship, we should oppose this move.

Thirty years or more ago provision was made in our basic law providing for qualified doctors licensed in other states, to secure licenses here by reciprocity. If these men whom it is contemplated will come here because of this law are properly qualified they can come here now without this law. If they are not properly qualified the state does not want them.

REFUGEE PHYSICIANS

■ There are over six thousand refugee physicians in the United States who wish to re-enter the practice of medicine. They cannot meet the requirements demanded by our states for licensure because of citizenship or other questions. It is suggested that our standards be changed and licenses be granted without charging a fee.

The Army and Navy need more doctors. There used to be a classification in the services of "Contract Surgeon" which these men could fill even though they are not citizens and consequently are not eligible for commission. We want only the best of physicians for our armed forces! Such employment of this backlog of idle physicians would be an advantage, for as contract surgeons they would be under direct control of well-trained officers. In civilian practice they would not be under adequate supervision.

The urge for more doctors to service civilian and industrial needs, as well as the military, is appreciated and this suggests a road to usefulness of a large group not now employed, and without legislative action.

SULFA DRUGS

During the other World War medical officers were required to "tag" all those patients who had received A.T.S.

Sulfa drugs are being freely used and we are seeing anaphylactic reactions, with temperatures of 106° and alarming prostration. A few days ago a doctor told us of a patient who died, as he believed, from too much of one of the sulfa drugs. Some days before he had treated this patient, administering sulfadiazine with alarming reaction, chills, fever and prostration. He withdrew the drug, but the patient soon went to another doctor who also gave the same drug, with disastrous results.

Are some of the sulfa drugs so apt to produce untoward symptoms that we should adopt a plan of marking these patients, or should we at least always question the patient before giving the drugs?

SELECTIVE SERVICE EXAMINATIONS

■ Two years have passed since the start of Selective Service and the Medical examinations of selectees. The first group was given very thorough examinations, and if one was rejected subsequently at the induction center, it was a matter of chagrin. We felt it was, partially at least, a reflection on our own thoroughness. We had been assigned a job, and we were doing it to the best of our ability. When we had accepted a man we wanted to know why he had been rejected, so studied the rejection slip. At that time we were examining under the same rules as the army at induction centers. The Medical examining boards were rejecting an alarming percentage of the men presented to them, and were questioning what could be done to make our young men more healthy, more perfect physically. Studies were being made as to rehabilitation, and suggestions offered. But that is all a matter of history.

New regulations were issued in April regarding the preliminary examinations, which were turned into a sort of screening. Examinations are now being made under an entirely different

set of rules than that under which the induction centers are working. We do not actually send in wooden legs, but under the rules we do send in glass eyes at present. D.S.S. Form 220 as revised 8-15-42, gives a list of diseases of the eye which disqualify a registrant, including "total blindness." The disqualifying ear conditions are: "Atresia of both external auditory canals" and "total deafness." Manifestly there will be many things found that will disqualify, such as chronic otitis media, loss of one eye, et cetera. Men with such defects cannot be taken into the Army, or at least have not been, yet they must be sent to the induction centers.

This whole examination has become so superficial that many of our examiners are of the opinion it should be changed in several respects or discontinued. The differences of scope of the selective service and the induction center examinations alone proves the need for change. One examination would, it is true, involve a little more travel, but with two and doing a real job as was done at first, much of the travel now necessary would be eliminated.

With so many doctors called to the armed forces it is getting difficult to find doctors with time to devote to these examinations as at present constituted. Those who do examine are willing to do a complete and patriotic service, but many in self-defense against the criticism of ineffective examinations have adopted the attitude that the whole thing is a joke, and tell the draftees outright their examination is not to find what defects are present, but "to find wooden legs and tin ears." The examiners would like again to feel that they were rendering a useful service, and as competent a service as they are capable of doing.

By a recent order the insignia of Navy Medical Officers qualified as Flight Surgeons is to be the traditional gold wings with a gold oak leaf and silver acorn superimposed on the central oval crest. This pin is worn over the left breast. The symbols of the oak leaf and acorn are associated with the Druids, ancient medical priests of the Britons, who wore white robes with these designs embroidered in gold on the sleeve. The Medical Corps of the Navy has used these insignias since 1832.—*Southwestern Medicine.*

IN MEMORIAM

DIED IN SERVICE

Claude E. Hale of Marshall was born in Chicago, Illinois, on January 20, 1896, and was graduated from the Vanderbilt University in Nashville, Tenn. He served his internship in General Hospital, Chicago. He was a veteran of World War I and had maintained his status as a reserve officer. He was called into active service in the summer of 1941, and for many months was stationed at Fort Sill, Okla. Later he was moved to Fort Custer, remaining for a short time prior to leaving for California and the South Pacific. At the time of his death, he was serving as an assistant regimental surgeon with an infantry division. He died somewhere in the South Pacific, on November 5, 1942.

Reuben Peterson of Duxbury, Massachusetts, was born in Boston, Massachusetts, on June 29, 1862, and was graduated from Harvard University Medical School in 1889. After graduation, he practiced in Grand Rapids for several years and later taught at Rush Medical College in Chicago. He then went to the University of Michigan as head of the department of obstetrics and gynecology. Dr. Peterson served his nation during World War I, holding the rank of major and having charge of organizing the state draft board's medical affairs. He was a fellow of the American Gynecological Society, of which group he was president in 1911. He was also president of the Chicago Gynecological Society in 1910. He was a fellow and one of the founders of the American College of Surgeons and was an honorary fellow of the Edinburgh Obstetrical Society. Dr. Peterson was professor emeritus of the University of Michigan department of obstetrics and gynecology since his retirement in 1931. He was the oldest living past-president of the Michigan State Medical Society at the time of his death, November 26, 1942.

Production of precision lenses, the "glass eyes" of gunsights, binoculars and other military instruments, has been greatly speeded by a diamond-impregnated grinding machine which automatically grinds curves or planes on glass. A wide range of curves can be ground with the device and from one to fifty lenses made in a single operation, depending on the size. The War Department is equipping certain plants with the device, it is reported.—*Science News Letter,* December 26, 1942.

YOU AND YOUR BUSINESS

ARE YOU WILLING TO BE DISLOCATED?

Frank H. Lahey, M.D., Chairman of the Directing Board of Procurement and Assignment Service, requested that the following statement be published so that it receives the attention of all Michigan physicians:

"It is of the utmost importance that the Procurement and Assignment Service for Physicians, Dentists, and Veterinarians, immediately has the name of any doctor who really is willing to be dislocated for service, either in industry or in over-populated areas, and who has not been declared essential to his present locality. This is necessary if the medical profession is to be able to meet these needs adequately and promptly. We urgently request that any physician over the age of 45 who wishes to participate in the war effort send in his name to the State Chairman for the Procurement and Assignment Service in his State."

★ ★ ★ BUY WAR STAMPS AND BONDS ★ ★ ★

MICHIGAN LOCALITIES NEEDING DOCTORS OF MEDICINE

According to the survey of availability of medical service for civilian needs being conducted through county medical society secretaries, the following localities need additional medical service. Physicians willing to be dislocated are invited to investigate the opportunities in these cities and counties:

Augusta
Climax
Clio
Delton
Eaton Rapids
Ferndale area
Fulton
Gladwin County
Hillman
Homer
Horton
Iron County
Ludington
Mendon
Missaukee County
Mt. Morris
Monroe
Muskegon
New Baltimore area
Rogers City and Presque Isle County
Royal Oak
Sault Ste. Marie and Chippewa County
Schoolcraft
Swartz Creek
Tekonsha
Vicksburg
Wexford County

★ ★ ★ BUY WAR STAMPS AND BONDS ★ ★ ★

POSTGRADUATE INDUSTRIAL, MEDICAL AND SURGICAL CONFERENCE

The Committee on Industrial Health of the Michigan State Medical Society and the Michigan Association of Industrial Physicians and Surgeons are planning a "Postgraduate Industrial Medical and Surgical Conference" for early spring. This one-day meeting will be held in Detroit and will include twelve interesting and instructive presentations of one-half hour each, from 9:00 a.m. to 5:00 p.m.

Ten round-table luncheon discussions will be held from 12:15 to 1:45 p.m.

The banquet in the evening will be addressed by an eminent speaker.

The full program will be presented in the next issue of the MSMS Journal.

This meeting is open to all members of the Michigan State Medical Society. There will be no admission charge.

★ ★ ★ BUY WAR STAMPS AND BONDS ★ ★ ★

ANNUAL COUNTY SECRETARIES' CONFERENCE

How Can the Medical Profession Meet Military, Industrial, Research, and Civilian Needs During Wartime?

Will Michigan Grant "Temporary Licenses" to Refugee Physicians?

Is Group Disability Insurance Desirable for Michigan Physicians?

What are the New Provisions in the Income Tax for 1942?

Are There Any Spies in Michigan?

How Does the Rationing Program Affect Michigan Physicians?

These are some of the topics that will be discussed at the Conference of County Medical Society Secretaries to be held at the Olds Hotel, Lansing, Sunday, January 24, 10 a.m. to 4 p.m. D. C. Bloemendaal, M.D., of Zeeland will preside at the meeting. The program appears on page 76.

All members of the Michigan State Medical Society will be welcomed at the County Secretaries' Conference, particularly the presidents, secretaries and editors of county medical societies, and the chairmen of committees of the State Society.

★ ★ ★ BUY WAR STAMPS AND BONDS ★ ★ ★

DOCTORS SHOW BATTLE TECHNIQUE

On September 5, the only medical field service school of its kind in any army gave a demonstration of medical work under mock battle conditions at Carlisle Barracks, Pennsylvania. As the Medical Corps is now organized, personnel of field service units are able to give aid to wounded combatants within a few minutes of the time they receive their injuries, at stations only 500 yards behind the lines.

Within ten minutes after a soldier falls, stretcher-bearers will be at his side to carry him back the 500 yards to a battalion aid station. Within six to eight hours, the wounded are moved through this station, the collecting station a mile behind the line, and the divisional clearing station, four to six miles to the rear, to a base hospital.

If necessary, operations can be performed at the collecting station, only a mile from the front. Appropriate treatment and nourishment are provided at all stages.—*J. Med. Soc. County of N. Y.*

HIGHLIGHTS OF TWENTY-SECOND ANNUAL PUBLIC HEALTH CONFERENCE

Michigan's Twenty-second Annual Public Health Conference held in Grand Rapids, November 12 and 13, was attended by 386 health officers, public health nurses, sanitarians and allied professional workers from all over Michigan. It was a shortened, intensified, working conference with public health in wartime as its theme.

Some of the highlights of the group discussions that occupied the two sessions of the conference follow:

A good wartime program in public health is a good peacetime program. These are changes in emphasis but the objectives are the same.

Some of the maternal and child health needs of wartime are increased use of women in industry, day care of children of women in industry, decrease in available medical care, shorter hospitalization of maternity cases, new demands on the time of the public health nurse, anticipated rationing of foods, concentration of population in industrial centers and shifting of population and the prospect of early entry into war activities of high school seniors.

Three "musts" imposed upon every health department are: (1) communicable diseases must be controlled; (2) more attention must be given to industrial hygiene; (3) effort must be made to aid in the rehabilitation of men rejected for military service.

Coöperative planning on the part of community agencies is essential in conserving the health worker's time for specialized tasks.

Health departments and civilian defense organizations should work closely together to secure the advantages of combined effort, thinking and action. The objectives of the health department are in essence civilian defense and protection.

ESCANABA'S NEW WATER SUPPLY MAY PREVENT TOOTH DECAY

Escanaba school children are supplying facts on tooth decay which may help in overcoming loss of teeth from such cause in the future.

The U. S. Public Health Service, University of Michigan and Michigan Department of Health are studying mouth conditions of Escanaba children, seeking particularly to measure discovered amounts of acid-forming bacteria which cause decay.

The Escanaba study has been undertaken because the projected use of fluoride-bearing water by that city in the future will afford a basis of comparison with mouth conditions found there now.

Dentists know that fluorides can lessen tooth decay. If they are present in too great quantity, and if children use such water while permanent teeth are being formed, they may cause mottling.

Escanaba now obtains its water supply from Bay de Noc. Wells have been driven to obtain a more satisfactory supply. These wells produce water containing one-half part per million of fluorides. The wells will be put into operation soon.

Records obtained in the present study will offer a basis for comparison of the effects of fluoride-bearing water when Escanaba's new water supply is put into use.

MICHIGAN HAS NEW PROBLEM IN CONTROL OF TUBERCULOSIS

A growing number of newly-discovered cases of tuberculosis in Michigan with a consequent shortage of sanatorium beds presents a new problem in the control of tuberculosis.

Pre-employment examinations of industrial workers, Selective Service examinations and photo x-rays taken in the State Health Department's traveling photo x-ray bus are uncovering hundreds of new cases each month. This year more than 5,000 were reported by the end of November.

With few exceptions, all approved tuberculosis sanatoria in the state have waiting lists of men and women in need of immediate sanatorium care.

REFRESHER COURSE PLANNED FOR PUBLIC HEALTH NURSES

A wartime shortage of nurses in rural areas may be met by action of the Michigan Department of Health in arranging a six weeks' refresher course for inactive public health nurses. The first two weeks, with enrolled nurses gathered in Lansing, will be a lecture period with emphasis placed on emergency adaptation of public health nursing procedures in communicable disease control, including tuberculosis and venereal disease, maternal and child health and school nursing, to be followed by a minimum of one month of training in the field with organized health departments.

The course will open next month and those nurses who complete it will be placed with health departments in rural areas.

A pill box which dispenses only one pill at a time has been recently patented. One pill at a time pops from a small opening in the molded, pocket-size container, the remainder being inaccessible and protected from dust and other contamination.—*Science News Letter,* Jan. 2, 1943.

Sinus sufferers may soon wear their heat treatment to bed with them. An electrically heated mask has recently been patented for this purpose.—*Science News Letter,* Jan. 2, 1943.

Woman's Auxiliary

MID-YEAR BOARD MEETING OF A.M.A. AUXILIARY

The midyear board meeting of the Woman's Auxiliary to the A.M.A. was held in Chicago, November 20, at the Palmer House. There were forty members present which well represented the interest and effort members made to attend the meeting during these troublesome times with traveling so difficult.

Mrs. Frank N. Haggard, national president, read her report in which she stated that "Health For Victory" should be our theme this year.

Every effort should be made to create greater unity of Auxiliary work, through war work and nutrition. The greatest danger to our country is the danger of disease both at war and at home. She also recommended that local dues for army wives be waved and that some method be devised by local auxiliaries to take care of National and State dues.

Mrs. George R. Dillinger, *Hygeia* chairman, reported that the magazine was becoming more important by taking a new and important place in industry, as many defense factories are now buying the magazine for its members and many first-aid teachers are urging their classes to buy *Hygeia*. She urged that every effort be made to place this magazine before the public.

The importance of legislation was stressed by Mrs. Luther H. Kice, who said, "We are confronted by uncertainty and confusion. It is our duty to show the states and counties the right path. In order to accomplish this we must study the outline of the political setup of government and be familiar with national interest, especially those pertaining to be under the control of physicians."

The continued effort to promote and circulate the subscription to the *Bulletin* was urged.

At the luncheon Dr. W. W. Bauer said the transportation problem was making speaking engagements very difficult to provide. Every effort will be made by the AMA to provide speakers, if audiences of 1,000 or more could be arranged to justify a personal appearance, or that material may be sent on request. Dr. Bauer urged that interest be created in the radio program, "Doctors At War."

Due to the national emergency it was voted that the members of the executive board and delegates meet in Chicago June 7, 8, 9, 1943, at the Drake Hotel to transact any business necessary.

The state presidents gave interesting reports of their work and activities. Outstanding were the emphasis on health education, war work, and legislation.

A resolution was introduced recommending the adoption of the Georgia Auxiliary plan of Doctors' Aides, and to present it at the national meeting in June, with the approval of the Advisory Council, which was unanimously accepted. The plan is in keeping with the mobilization of women in war effort. The Doctors' Aides developed out of the need of something that doctors' wives might do to aid the profession of which they are a part. This service is limited to members of the medical auxiliary who are willing to undergo a course of training for this purpose. The Doctors' Aides will earn, through study and service, the right to wear the medical insignia. The course of study is to be developed out of the need of the community.

Your president feels that this is a worth-while activity and hopes that it may be accepted by every county in Michigan.

Mrs. Wm. J. Butler, Director of the Woman's Auxiliary to A.M.A., will report the remainder of the proceedings.

In closing may I say that it was a very inspiring day and I consider it a great privilege to have been able to attend.

Respectfully submitted,

Mrs. G. L. Willoughby, *President*

MID-YEAR BOARD MEETING OF MSMS AUXILIARY

The mid-year Board meeting of the Woman's Auxiliary to the Michigan State Medical Society was held November 30, 1942, at the Durant Hotel, Flint, Michigan.

Mrs. G. L. Willoughby, president, was in Baltimore with her husband who is in the Army, and in her absence Mrs. H. L. French, vice president, presided at the meeting which followed luncheon. Nineteen members were present.

The *Auxiliary News* has been mailed to all county presidents to be distributed to the members.

Mrs. Milton Shaw, president of Ingham County, reported that their chapter had placed fifty *Hygeia* subscriptions in the schools, had given $100 to the Red Cross, and are to send Christmas boxes to their doctors in the service.

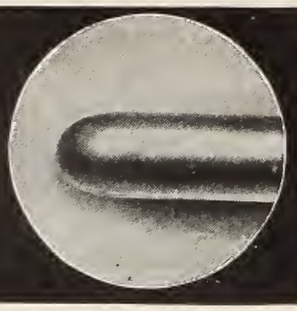
Kent County Auxiliary raised $350 for comfort kits for soldiers, and Saginaw County Auxiliary writes a monthly news letter for their doctors in service.

The Wayne County Auxiliary has furnished a day room at Fort Custer.

The Woman's Auxiliary is sponsoring a Radio Speech Contest in the high schools of Michigan, promoted by the Tuberculosis Association. Forty-eight schools are participating.

An elastic yarn with many of the characteristics of rubber has been produced synthetically and the present output is being used for military equipment. The new material, a vinylite resin, is said to be superior to rubber because it has better resistance to sunlight, tropical heat and humidity, and is not affected by body acids. Experiments indicate that the yarn can eventually be used to replace rubber in consumer goods, such as elastic webbing, women's girdles, suspenders, and surgical stockings.—*Science News Letter,* Dec. 12, 1942.

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City ..... State .....

COUNTY AND PERSONAL ACTIVITIES

H. H. Cummings, M.D., President of the Michigan State Medical Society, was appointed Chairman of the Department of Postgraduate Medicine and Professor of Postgraduate Medical Education by the Board of Regents of the University of Michigan, on December 17, 1942.

Congratulations, Professor Cummings!

* * *

Sue Hurst Thompson, M.D., formerly Health Officer of District No. 2, Michigan, has been appointed Head of the Columbia County Health Unit, New York.

* * *

The Physicians' Service Laboratory, of which M. S. Tarpinian, B.S., is Director, have removed their offices to more roomy quarters at 610 Kales Building, Detroit.

* * *

Albert Wilhelm Petersohn, M.D., of Battle Creek has contributed $25 to the Michigan State Medical Society Foundation for Postgraduate Medical Education.

* * *

K. E. Markuson, M.D., Chairman of the MSMS Industrial Health Committee, addressed the Wexford County Medical Society on December tenth. His subject was "New Problems in Industrial Health."

Nancy Harkness Love of Boston, Director of the WAFS (the Woman's Auxiliary Ferrying Squadron) is the daughter of Robert Bruce Harkness, M.D., of Hastings.

* * *

Sister Elizabeth Kenny of Australia was awarded the Gold Key by the American Congress of Physical Therapy as the person "who has made the greatest contribution in the field of physical therapy during the past year."

* * *

F. D. German, M.D., of Pontiac, Michigan, is a Fellow in Postgraduate Medicine of the Michigan State Medical Society. His name was not published in the list of Fellows which appeared in the September MSMS JOURNAL.

* * *

Martin H. Hoffman, M.D., has offered his resignation, effective February 1, 1943, as Director of the Psychiatric Clinic at Eloise Hospital and Head of the Wayne County Psychopathic Parole Clinic. Dr. Hoffman will return to private practice in Detroit.

* * *

"Doctors At War" is the title of the weekly radio presentation of the American Medical Association and

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ROMEO MICH.



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the National Broadcasting Company. This coast-to-coast NBC broadcast of twenty-six weeks, which began December 26, is given Saturdays, 5:00 p.m., EWT. It features "The Doctor in the Army, in the Navy, in Industry, and at home."

* * *

The Medical Society of the State of New York cordially invites the members of the Michigan State Medical Society to attend its annual meeting set for May 3 to 6, 1943, at the Hotel Statler in Buffalo. Scientific sessions begin on the morning of Tuesday, May 4, and continue through Wednesday, May 5, and Thursday, May 6.

* * *

R. M. Nesbit, M.D., and *Robert H. Cummings, M.D.,* Ann Arbor, are authors of an original article entitled "Prostatic Carcinoma Treated by Orchidectomy" which was published in the December 5 *Journal of the American Medical Association.*

W. E. Jahsman, M.D., Detroit, is the author of "Follicular Lymphoblastoma" which appeared in the same number.

* * *

No Age Limit on Malpractice Insurance.—The Aetna Life Insuurance Company, the Medical Protective Company, and the U. S. Fidelity and Guaranty Company have advised the Michigan State Medical Society that their restrictions to certain risks because of age (for example, to physicians over 70 years) will not exist for the duration in the case of active practitioners of medicine. These companies are commended on this action.

* * *

The Fifth Annual Congress on Industrial Health, sponsored by the Council on Industrial Health of the American Medical Association, was held in the Palmer House, Chicago, January 11-13, 1943. Leaders in the industrial health field found this to be one of the most important conferences touching a vital medical problem of the nation's war effort. Michigan was well represented at the conference.

* * *

The American Urological Association at its Executive Session of June 3, 1942, recommended that all educational institutions in the United States which prepare students for the study of Medicine should teach a minimum of two years of Spanish and/or Portugese, as an attempt to obviate linguistic difficulties existing between the Latin American and English speaking countries of the western hemisphere.

* * *

C. E. Umphrey, M.D., Detroit, has been appointed as the representative of the Michigan State Medical Society on the Medical Advisory Committee to the State Council of Defense, effective December 17. The appointment was made by President H. H. Cummings, M.D., to fill the place left vacant by the resignation of P. R. Urmston, M.D., who had served as the State Society representative since the formation of the Defense Council's Advisory Committee.

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✚

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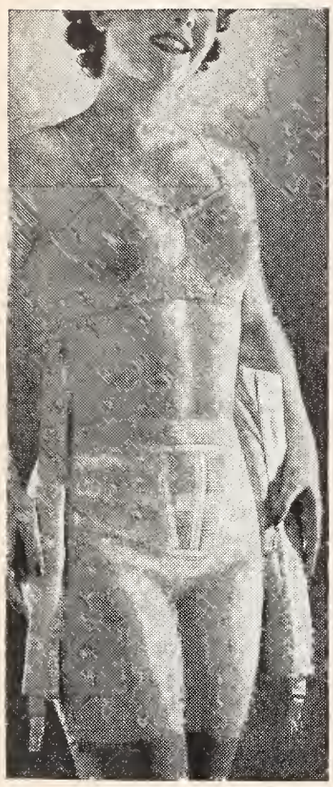
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The National Conference on Medical Service will be held at the Palmer House, Chicago, on Sunday, February 14.

All members of the profession are invited to this economics conference, particularly important during wartime. A copy of the program may be obtained from W. L. Burnap, M.D., Secretary of the National Conference, Fergus Falls, Minnesota.

* * *

Your Friends—

Detroit X-Ray Sales Company, Detroit, Michigan
Doho Chemical Corporation, New York, N. Y.
Duke Laboratories, Inc., Stamford, Connecticut
E and J Resuscitator Company, Detroit, Michigan
J. H. Emerson Company, Cambridge, Massachusetts
H. G. Fischer & Company, Chicago, Illinois
C. B. Fleet Company, Lynchburg, Virginia
General Electric X-Ray Corporation, Detroit, Michigan
Gerber Products Company, Fremont, Michigan
Hack Shoe Company, Detroit, Michigan

The above ten firms were among the exhibitors at the 1942 MSMS annual meeting in Grand Rapids and helped make possible for your enjoyment one of the outstanding state medical meetings in the country. Remember your friends when you have need of equipment, medical supplies, appliances or services.

* * *

Military Membership in the Michigan State Medical Society is granted only to Active Members in good standing with State Society dues paid *for a full year,* who are serving their country in the armed forces of the United States. They are relieved of paying MSMS dues during the period of such active service if certified by the county society on special MSMS blanks. Members who have already paid their dues for the current year and during that year are called into active military service shall be accorded, upon their return home, one year's membership without the payment of MSMS dues.

Newly-elected members must pay one full year's dues in order to be eligible for military membership.

* * *

Medical exhibits for medical societies are available on a loan basis from the American Medical Association, 535 No. Dearborn Street, Chicago. Write T. H. Hull, Director, Scientific Exhibits. Some of the subjects of exhibits are: "Heroes of Medicine"; "Tularemia"; "Food Fads"; "Chemistry of Vitamin K and Synthetic Hormones"; "Use and Abuse of Barbiturates"; "Chemistry of the Gastric Antacids"; "Chemistry of the Sulfonamide Drugs"; "Posture"; "Amputations"; "Dietary Deficiency Diseases"; "Industrial Health Program for a County Medical Society"; "Cutaneous Manifestations of Tuberculosis"; "Cutaneous Granulomas"; "Cutaneous Manifestations of Syphilis"; "Pneumoconiosis"; "Asbestosis"; and "Silicosis."

* * *

The Bay County Medical Society recently presented past-presidents' keys to its 24 living past-presidents. Charles H. Baker, M.D., Past-President of the Michigan State Medical Society, as well as of the Bay County Medical Society, read an address on "Early Medicine in Bay County." Keys were presented to: Charles H. Baker, M.D.. 1887; William Kerr, M.D., 1895; V. L.

JOUR. MSMS

Tupper, M.D., 1907; W. R. Ballard, M.D., 1908; R. C. Perkins, M.D., 1912; G. W. Moore, M.D., 1913; J. C. Grosjean, M.D., 1916; R. C. Scrafford, M.D., 1920; G. M. McDowell, M.D., 1921; A. J. Zaremba, M.D., 1922; E. C. Warren, M.D., 1923; P. R. Urmston, M.D., 1924; V. H. Dumond, M.D., 1926; C. W. Ash, M.D., 1930; M. R. Slattery, M.D., 1932; E. S. Huckins, M.D., 1933; J. H. McEwan, M.D., 1934; S. L. Ballard, M.D., 1935; M. C. Miller, M.D., 1936; A. D. Allen, M.D., 1937; C. L. Hess, M.D., 1938; L. Fernald Foster, M.D., 1939; R. H. Criswell, M.D., 1940; and R. N. Sherman, M.D., 1941.

* * *

The Genesee County Medical Society is distributing a leaflet entitled "Save Your Health and Your Doctor's Time." The leaflet states: "Here's How:

"1. Instead of asking the doctor to come to your home, go to his office when you can.
"2. If a house visit is necessary, call the doctor before 8:30 in the morning so that he can plan his house calls efficiently. A morning temperature is usually followed by a higher one in the afternoon.
"3. Don't neglect to inform your doctor of the early signs of sickness. A timely visit to your doctor may prevent serious illness, numerous house calls —even hospitalization.
"4. Whenever possible, leave the message with the doctor's secretary. Don't call him personally to the phone unless it is really necessary.
"5. Be patient with your doctor if you have to wait in his office, or if he does not respond at once to your call. Remember that he is caring for many more patients than formerly, and he has only twenty-four hours in his day."

* * *

Rheumatic Fever and Heart Disease—An interesting program has been launched by the American Heart Association, the Academy of Pediatrics, the Crippled Children's Division of the U. S. Children's Bureau, and by the Metropolitan Life Insurance Company, the purpose of which is twofold: to acquaint the public with the newer knowledge of rheumatic fever and rheumatic heart disease; and to distribute to the medical profession up-to-date literature covering various aspects of the rheumatic fever problem.

* * *

The Detroit Medical News, official organ of the Wayne County Medical Society, ran an interesting analysis in the November 23 issue of "Medical Facilities in Wayne County." It showed that the normal supply of physicians in Wayne County before the military emergency was 3,013; that 832 physicians are in military service (as of October 14, 1942), leaving a balance remaining in Wayne County in all classifications of 2,181.

The total number of hospital beds in Wayne County amounts to 21,777, including 714 in federal hospitals.

* * *

The "Health for Victory Conference" sponsored by the Wayne County Medical Society and held at the Rackham Educational Memorial Building in Detroit on December 4 and 5, was a most successful and educationally-profitable venture. Speakers included G. L. McClellan, M.D., President of the Wayne County Medical Society; C. E. Simpson, M.D., immediate Past-Presi-



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A convenient and compact diagnostic set containing 90 of the most common irritants (dietary, contactants, inhalants, etc.) is essential in determining these factors. Determine the trouble-makers by our new and rapid time-saving technique which permits your assistant to run the complete series within 15-20 minutes.

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* * *

One Hundred and Seventy-seven Rejectees Hospitalized.—Selective Service physical examinations have resulted in the hospitalization in recent months of 177 Michigan men with active tuberculosis. These men represent more than 90 per cent of the 201 cases of active tuberculosis which have been found among the 1,651 Michigan selectees turned down as "chest rejects" by Selective Service examiners since the draft law went into effect.

On December 1, 1942, local departments of health were arranging for reëxamination on 568 additional names. The yield for those cases that have already been reëxamined is 23 per cent (requiring sanatorium care). There is every reason to believe that the yield on these 568 cases with reëxamination pending will be approximately the same. In other words, 125 more cases will require hospital care when these remaining 568 have been checked through. From the public health standpoint, this is highly worthwhile, since there is probably no other group in tuberculosis case finding that would bring a higher yield than this.—Mich. Dept. of Health, Dec. 17, 1942.

* * *

Urology Award—The American Urological Association offers an annual award "not to exceed $500" for an essay (or essays) on the result of some specific clinical or laboratory research in Urology. Competitors shall be limited to residents in urology in recognized hospitals and to urologists who have been in such specific practice for not more than five years.

The selected essay (or essays) will appear on the program of the forthcoming meeting of the American Urological Association, May 31-June 3, 1943, Hotel Jefferson, St. Louis, Missouri.

Essays must be in the hands of the Secretary, Dr. Thomas D. Moore, 899 Madison Avenue, Memphis, Tennessee, on or before March 1, 1943.

* * *

Doctor Fined—On Probation

Fines of $600 each on two indictments and a probation period of three years on the third count was the sentence for Dr. William A. Kopprasch, Allegan physician, who appeared before Judge Fred T. Raymond in Grand Rapids federal court Tuesday after pleading guilty. A sentence of two years in prison was suspended on condition that the fines are paid within forty-eight hours.

Kopprasch was indicted by a federal grand jury in October on charges of sending large quantities of dilaudid through the mails. He was specifically charged with having sent the dilaudid on three different occasions, which resulted in the three indictments. Dilaudid is an opium derivative.

Kopprasch sent the dilaudid to Jacob H. Fisher, Detroit, who later died, but it was pointed out by the Allegan doctor's attorneys that Fisher could have died from any one of a number of ailments.

He had pleaded not guilty originally but during his trial last week changed the plea after the government had presented its case against him.

Kopprasch, forty-nine, has been in Allegan a number of years and has operated the John Robinson hospital for the past ten years or more.—*Allegan Gazette,* November 26, 1942.

The doctor in question is the one who has been used by a certain attorney specializing in medical malpractice cases to establish the medical testimony necessary to get the case in court.

Keep It That Way.—More members of the medical profession are going into military service every day. Young doctors just out of medical school, doctors who have barely established themselves in the community, and long-established men who would soon begin to shift the burden of their practice to new partners, are donning uniforms. For the medical men remaining at home, the task will become gigantic. But one and all they are grimly determined that essential medical care will be provided to civilians.

There are many ways in which the layman can help in this medical crisis. He can guard his own physical well-being by keeping regular hours and eating and sleeping properly. He can be tolerant if he is kept waiting for an appointment. And he should follow stringently the advice of his physician in order to return himself to full usefulness as soon as possible. These are the tangible ways in which the layman can help the doctor.

In addition, there is a vast intangible aid that we can give our medical men. We can keep in mind the fact that they are a part of the system of private medicine that has doubled the span of life for the ordinary citizen in a comparatively few years. The doctors in the armed forces, just as the ones staying at home, spent years in training and more years interning because competence and efficiency are the very foundation stones of our medical system. THERE IS NO TAINT OF "ISM" OR POLITICS IN THEIR BLOOD. The worst disservice we could do them in their absence would be to lend ear to crackpot schemes to inject political control of any form whatsoever into the medical profession. As it stands today, AMERICAN MEDICINE GIVES US THE BEST CARE IN THE WORLD. LET'S KEEP IT THAT WAY.—*Greenville Daily News,* Nov. 17, 1942.

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Morning

1. The Rationing Program as it Affects Physicians—Edward T. Broadwell, Rationing Director, OPA, Detroit, Michigan.
2. Are There Any Spies in Michigan?—Captain Harold Mulbar, Michigan State Police, East Lansing, Michigan.
3. The New Federal Income and Victory Tax Law—J. W. Holloway, Jr., LL.B., J.D., Bureau of Legal Medicine, American Medical Association, Chicago, Illinois.
4. Facts for the Physician—L. Fernald Foster, M.D., Secretary, Michigan State Medical Society, Bay City, Michigan.

Question and Answer Period

Cocktails and Noonday Dinner

5. Greetings from—Harry F. Kelly, LL.B., Governor of Michigan.
6. How the Medical Profession Can Meet Military, Industrial, Research, and Civilian Needs During Wartime—M. E. Lapham, M.D., Procurement and Assignment Service, Washington, D. C.

Afternoon

7. Your Disability Insurance Dollar—How to Make the Most of It.—Harold R. Gordon, Executive Secretary, Health and Accident Underwriters Conference, Chicago, Illinois.
8. "Temporary Licenses" and Dislocating of Physicians—J. Earl McIntyre, M.D., Secretary, Michigan State Board of Registration in Medicine, Lansing, Michigan.

Question and Answer Period

THE DOCTOR'S LIBRARY

Acknowledgment of all books received will be made in this column and this will be deemed by us as a full compensation of those sending them. A selection will be made for review, as expedient.

CONSTITUTION AND DISEASE. Applied Constitutional Pathology. By Julius Bauer, M.D., Professor of Clinical Medicine, College of Medical Evangelists, Los Angeles, California, formerly Professor of Medicine, University of Vienna. New York: Grune and Stratton, 1942. Price, $3.50.

This volume is based upon the lectures given at the University of Vienna between 1923 and 1938 in the author's courses for American students on the subjects of Constitutional Pathology, and considers such problems as obesity, blood pressure, overweight in teen age, menopause, cancer as related to people of different constitutions. He adopts his diagnostic and therapeutic efforts to the individual rather than the disease. The role of heredity on certain diseases is stressed: genetics, endocrine types, psychoanalysis, all are given their place. The book makes one think and stimulates further study.

FUNDAMENTALS OF PSYCHIATRY. By Edward A. Stretcher, M.D., Sc.D., F.A.C.P., Professor of Psychiatry and Chairman of the Department, Undergraduate School of Medicine, University of Pennsylvania; Psychiatrist to the Pennsylvania Hospital. 15 Illustrations. Philadelphia: J. B. Lippincott Company, 1942. Price, $3.00.

With the shortage of doctors due to the needs of the armed forces and the threat of rationing of doctors to the armed forces and the civilians "it becomes necessary that all physicians be versed not only in the routine of medical practice, but have at least a minimum of understanding of the subdivisions and specialties of medicine." This comes at a time when psychiatry has something more to offer than during our school days. This book is a frank and concise treatise on this for so long mysterious subject. "Probably not less than one-half of all mental diseases finds a satisfactory explanation in the same basic causes which are operative in all diseases—lues, arteriosclerosis, intoxications and autointoxications, trauma, et cetera." This book gives a rapid survey of the field, pointing out indications, treatments, and diagnostic methods. It takes five years to train a physician to be a psychiatrist, but every physician can and should secure a working grasp of the essentials. The style is good, clear, and precise.

DOCTORS OF THE MIND. The Story of Psychiatry. By Marie Beyton Ray. Illustrations by Ruth Ray. Boston: Little, Brown and Company, 1942. Price, $3.00.

Mrs. Ray has made the development of psychiatry as interesting as a well-written novel. She has told the story of much groping in the dark and the gradual lifting of the curtain on the study of the mind. The first few pages are of an introductory nature and are a bit profound. Witness: "When a human being ceases to acquire words, he has reached the ceiling of his intelligence. He will go on thinking but only with the ideas (words) he has already acquired. The larger the vocabulary of an individual, the higher his intelligence."

Following this introduction we meet young Dr. Paul Broca and his man "Tan" in 1861 making an intensive

study of the man during his last few days because of the early loss of speech, then studying the brain to determine the center of speech, Broca's convolution. That is a fascinating story wonderfully told.

In 1940 we see Dr. Vincent in Paris operating on Mme. Berthier who has grown ugly, ill tempered, menacing, incoherent. For eight hours under local anesthesia Dr. Vincent works on that brain, and finishes with a normal, charming woman as she had been, who has witnessed the change in her own personality.

Mesmer is introduced, with his animal magnetism, being expelled from the medical faculty of Vienna. Freud, Dr. Sakel with his insulin shock for the relief of schizophrenia, Meduna and his metrazol, Pinel who cut the chains restraining lunatics. But read the book, you will find it most interesting and entertaining. Mrs. Ray has made psychiatry entertaining.

FIRST AID, SURGICAL AND MEDICAL. By Warren H. Cole, M.D., F.A.C.S., Professor and Head of the Department of Surgery, University of Illinois College of Medicine, and Charles B. Puestrow, B.S., M.S., M.D., Ph.D., F.A.C.S., Associate Professor of Surgery, University of Illinois College of Medicine and Graduate School. Illustrations by Carl Linden in collaboration with Tom Jones of the Illustration Schools of Illinois College of Medicine. New York: D. Appleton-Century Company, Incorporated. 1942. $3.00.

The War has made first aid of primary importance to all medical practitioners, and schools are stressing the subject. Marked increase in industrial development and automobile accidents had already made this subject of general value. There is a difference between first aid and treatment and this is stressed by these authors. Most of the text is devoted to emergencies related to conditions created by war, not only this one but the former when poisonous gases were first used. The first part of the book considers general principles and when first aid should be given, the underlying anatomical and physiological conditions, and techniques. Bandaging is taught as the means of accomplishing certain objectives, rather than an art. Wounds, shock, transfusions, bleeding, burns, fractures, transportation of the injured are all given important treatment. Special attention to transportation—the treatment of first indications and determination of seriousness of injury before the victim is moved, is stressed. War gases, bomb raids, and many commoner emergencies are studied. This book is well illustrated and very readable. It contains about 350 pages, and is carefully indexed for ready reference.

MENTAL ILLNESS, A Guide for the Family. By Edith M. Stern, with the collaboration of Samuel W. Hamilton, M..D New York: The Commonwealth Fund, 1942. $1.00.

Insanity is described and considered throughout this little book as a mental illness, the same as a person can have a physical illness. The book is written by an author who has made extensive studies of mental hospitals and their problems. Nothing is said as to diagnosis or specific treatment. The book is written for the layman, who is so unfortunate as to have a mentally ill person in his family, giving information on when and how to hospitalize, also where. Different kinds of hospitals are described, as is also the handling of the patient before he is hospitalized, during the period of mental illness, and afterward when the patient is finally released, as fully 50 per cent are in most of

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our better mental disease hospitals. In reading the book one feels as though Mrs. Stern has been talking to the reader, giving one a feeling of reassurance. Every family who has a mental illness patient should have this book, and should read it.

HUMAN PATHOLOGY. By Howard T. Karsner, M.D., Professor of Pathology, Western Reserve University, Cleveland, Ohio. Sixth edition completely revised and reset. Pp. 817. 460 illustrations in black and white and 24 subjects in color on 16 plates. Philadelphia, Montreal and London: J. B. Lippincott Company, 1942. Cloth, $10.00.

This book has reached its sixth edition, which in itself sets this publication apart as a standard accepted book on pathology. It can be recommended for the medical student, and for the clinician who wishes to familiarize himself with the underlying principles, mechanisms, and processes of disease. This edition has been modernized and brought up to date.

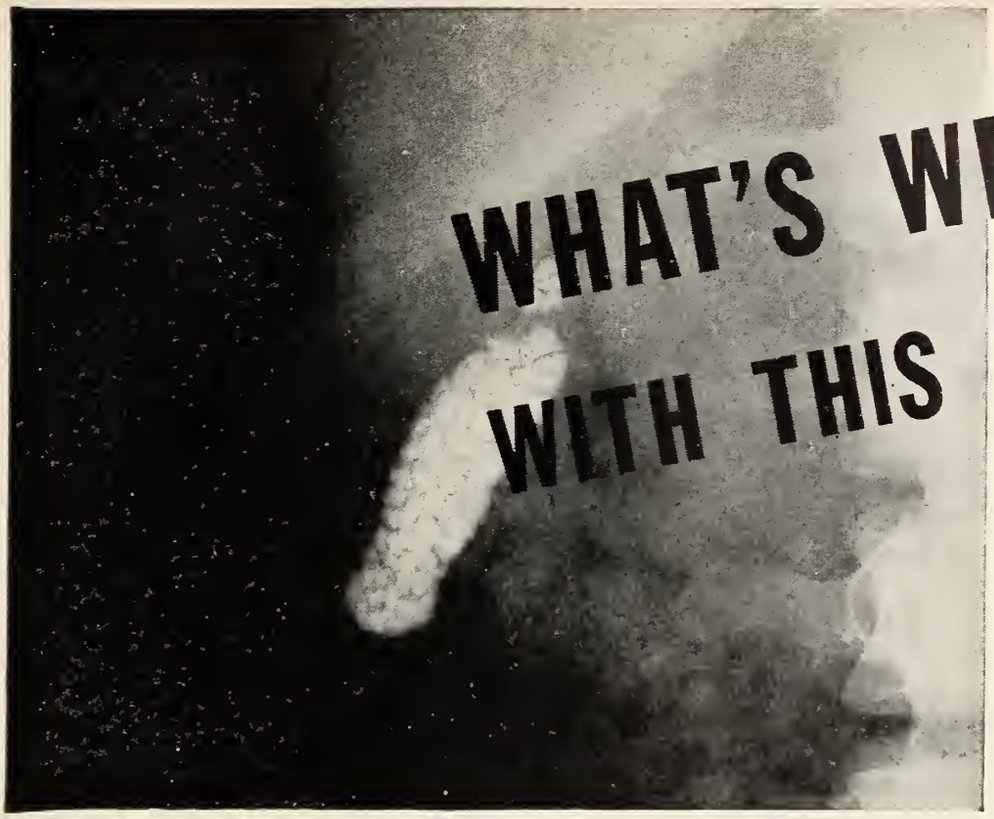
The author adheres strictly to accepted theories, principles and facts which he presents in a concise manner. The essentials of pathology are well covered as well as some of the more rare conditions. For example, a brief description is given of progressive bacterial synergistic necrosis. This condition is occasionally encountered by the surgeon postoperatively and its treatment presents a real problem unless recognized in its true light.

Conciseness, often with definition briefness, characterizes this work. Such diseases as malaria and yellow fever are described too briefly for clarity and understanding for those not familiar with the pathology of these disorders. Grading of tumors indicating the degree of malignancy is only briefly outlined. Today the average surgeon is as much interested in the grade of the tumor as he is in the diagnosis itself. Grading of tumors may not be applicable to all forms of tumors or have the prognostic significance that it was thought to have when first introduced, yet the clinicians have adopted it as a working basis.

Placing the references at the end of each chapter makes a convenient arrangement. References are selected from English publications only, and while these do not completely cover the literature on a given subject they suffice for all except those wishing to prepare original articles.

MILITARY MEDICAL MANUALS—Manual of Dermatology: Issued under the Auspices of the Division of Medical Sciences of the National Research Council. By Ronald M. Pillsbury, M.D.; Marion B. Sulzberged, M.D.; Clarence S. Livingwood, M.D. 421 pages with 109 illustrations. Philadelphia and London: W. B. Saunders Company, 1942. Price, $2.00.

This Manual of Dermatology is another of the Military Manuals produced for the use of the Military. It is small, of pocket size and sufficiently complete. It contains thirteen charts showing the distribution of skin diseases, and their diagnosis by distribution. There are eighty-one full-page illustrations of dermatological conditions. Following this is the text, description, diagnosis, treatment. An appendix gives over eighty formulas and medicaments with their indications. The volume is expertly prepared and edited; printed in good type on nonglaze paper, suitable for quick consultation.



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WAR BULLETINS

PLASMA IN THIS WAR

Guadalcanal—Six men struggle along a narrow, twisting trail bearing a stretcher on which lies a badly wounded Marine. His arm has been torn off by machine gun fire, and to the lay eye he appears lifeless. Behind the little group a viciously contested battle for a strategic hill in the Solomons continues.

Ahead of them, a scant 200 yards behind the front lines at an advance dressing station huddled beneath the trees for cover and protection, another battle is being fought. The Navy Medical Corps attached to the Marine unit is working against death.

As the limp body of the Marine is carried into the station a doctor glances at him and produces two small flasks. One is filled with distilled water; the other with a substance that looks like fine sawdust. Quickly the water is drawn by vacuum into the second flask, forming a straw-colored liquid. The doctor agitates the flask to dissolve all the sawdust-like substance. Then deft hands jab a needle into the Marine's veins. Slowly the liquid drains through a rubber tube.

The process has taken perhaps eight minutes; perhaps fifteen. But as the fluid drains into his body, color visibly returns to the man's face; his pulse quickens perceptibly and his body regains its heat. The regeneration is complete.

The work of the field doctors is done. One more live Marine will go back to the base hospital where he will receive all the refinements of hospital care. With emergency treatments, the doctors have staved off death. Once again plasma has done its work.

Out in the field, the Navy Medical Corps swears by the desiccated blood plasma. It has been established beyond all reasonable doubt that a great number of field casualties would have died from shock or loss of blood had it not been for this simple transfusion.

Plasma is easy to carry and easy to administer, even with the limited facilities of an advance dressing station. Doctors prefer to give the plasma transfusions themselves, but agree that corpsmen are perfectly capable of administering it.

SURGEON GENERAL OF NAVY STUDIES CONSULTANTS' RECOMMENDATIONS

Recommendations on expansion of the program for training naval medical officers in special fields were taken under advisement by Rear Admiral Ross T. McIntire, Surgeon General of the Navy.

Submitted by the Board of Honorary Consultants at the conclusion of a two-day meeting, the report proposes:

1. Training of brain surgeons in Naval Hospitals, under Navy surgeons, with civilian hospitals and teaching personnel being utilized only if limited facilities make this step necessary.

2. Increasing the number of skilled anesthetists, to be achieved, in part, by training and utilizing medical officers of the Women's Reserve. (The commissioning of 60 women medical officers in the WAVES has been authorized, such officers to be assigned to Women's Reserve training schools and stations.)

3. Supervision of optometrists by ophthalmologists-Naval surgeons whose specialty is the eye.

Training of more medical officers in chest surgery, continued emphasis upon physical therapy, and the exercise of care in diagnosing neuroses also were urged by the consultants, whose report was drafted by Dr. Frank H. Lahey of Boston, head of the Lahey Clinic, Chairman of the Procurement and Assignment Service, and former President of the American Medical Association.

PSYCHIATRIC PROBLEMS OF THE WAR*

Probably few of us have much conscious realization of how military activities have affected our mental attitude. Some months ago there was admitted to the University Hospital a patient who had been in the attack at Pearl Harbor. There was no physical injury and yet he was as real a casualty of the war as though he had been hit by a bullet. The incapacitating effects of his disease were greater than in many who were physically injured. For a time even the mention of Pearl Harbor would throw him into a frenzy. Gradually, the wounds caused by this mental injury have healed. No longer does he become disturbed by a discussion of the attack even though he still has a faulty memory of his experiences on that historic date. More than a year of continuous care has been necessary in the treatment of an injury of a type difficult for the average person to understand. This is only one example. Multiply this many times and one begins to realize the importance of preventing such occurrences. Before the war this man had made an adequate adjustment and as a peacetime soldier he had done well. Because he reacted in this way does not necessarily mean that he should be criticized nor that we should think of him as having a yellow streak. This man has a good deal to offer and will again take his place in society. But many others whose personalities are similar and who suffer similarly may become permanent casualties of the war.

As Colonel Halloran, Chief of the Division of Neuropsychiatry of the United States Army, said in a recent psychiatric conference, there has never been an era in the history of the world where psychiatry has been called upon to play such an important and complex rôle. Our country has need for a tremendous coördinated effort in which every man, woman and child must play his part. The mental and physical health of every

(Continued on Page 92)

*Radio broadcast by Dr. Raymond W. Waggoner, Professor of Psychiatry, Director of the Neuropsychiatric Institute, Chairman of the Department of Psychiatry, University of Michigan, January 6, 1943, under auspices of Michigan State Medical Society.



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(Continued from Page 90)

person must be at its best. For those who have served in the Armed Forces and have been returned to civilian life and those who have been rejected for such service, carefully planned programs should be developed to assist in their adjustment. Individuals who cannot serve in the Armed Forces may still add greatly to the war effort.

It is interesting to note that where civilian morale is high, psychiatric casualties are low and that soldiers from areas of high civilian morale make by far the best soldiers. The maintenance of sound and reasonable discipline is a splendid prophylaxis against psychiatric disability whether soldier or civilian. The Armed Forces recognize the important rôle which psychological factors play in physical conditions, knowing full well that a person physically ill gets well much more quickly if the mental attitude is good. Psychological factors may produce physical illness. The realization of this is important in civil life as in the Armed Forces. Too many people feel that if there is no physical disease, they are to be criticized for their illness. They are always anxious to find some physical explanation for their symptoms. The work of the doctor would be much easier and the patient would receive greater benefit if he would accept the importance of worry, anxiety and nervous tension. These factors can produce disease which has symptoms just as real as though there was pneumonia or appendicitis. So often the patient when told that his difficulty is mental or psychological feels subjected to criticism, that he ought to be ashamed of himself or that the difficulty is in his imagination. That this is not true cannot be emphasized too strongly.

Our Government has spent over a billion dollars in care of psychiatric casualties which occurred in the last war. Even in these days of astronomical figures it is obvious that this expense should be prevented as a consequence of *this* war if at all possible. Psychiatry can help with this problem. Unfortunately adequate psychiatric help is at a premium. However, much has been accomplished; for example, a psychiatric examination is part of the routine at the Army Induction Station. There is a far greater awareness of psychiatric problems in the Armed Forces now than there ever has been before. What about these persons who are incapable of adjusting in the Armed Forces? Are they a total loss? Many of these men are extraordinarily capable in civil life. If their situation is properly and carefully handled, they will continue to make a satisfactory adjustment in civil life.

Consider the person who is registered for Selective Service. He fills out a questionnaire, is examined by the local physician and is then classified by his local board. Both for his own good and the good of the service the questionnaire should contain information about any nervous or mental illness which may have occurred. If the physician finds some mental or physical condition present which would make it impossible to adjust in the Armed Forces, this is reported to the local board who should then wisely and carefully review the situation. If the difficulty is one which according to regulations will not allow the man to enter the Armed Forces, then he *should not* be sent to the Induction Station. There are borderline circumstances which require an Army examination. However, this is no place for an attitude such as expressed by one local board recently when the chairman told a registrant that he would be rejected when he went to the Induction Station but that he was going to be sent there anyway. This attitude is most unfortunate.

Psychiatry has an important rôle to play in industrial relationships. Especially is this true in these days of stress when every factory large or small is attempting to produce as much as is possible. The importance of understanding and improving the mental attitudes of workers is expressed in an industrial mental health manual which has just been issued by the Michigan Industrial Mental Health Council. It was pointed out in the preliminary statement of this manual that tension, anxiety and worry which follows the increasing need for production may produce disturbing changes of behavior characterized by preoccupation, quarrelsomeness, indifference and confusion. Such changes result in being absent from work, increase in accidents, ineffectual activity and a drop in production.

Many employers are taking advantage of psychiatric and psychologic advice, realizing the improvement in mental attitude of the worker when this advice is followed and that a satisfied and contented worker produces far more than one who is dissatisfied, unhappy and constantly grumbling.

Perhaps the most important factor in the present war situation which, due to the stress of immediate needs, may be overlooked is the effect of the war upon our children. The problem of the war and its effect upon children and their treatment differs at various ages. The departure of the father for military service or other activity resulting in long absence from the home, the need in many instances for the mother to work in a war plant with day care for the child, all strike at the most important element in the development of the young child; that is, the sense of security.

A certain amount of fear is healthy. When we describe any person, child or adult as having no fear we are probably not being accurate in our description. He may show no outward evidence of fear but the very adequateness of his behavior may be his reaction to fear. Controlled fear then is a healthy emotion driving us to build defense against injury. In a child, fear should not be allowed to develop to the point of anxiety. If he hears his elders talking about the war, expressing their doubts and anxieties, then the child feels insecure. In the very young child, this may cause a return to an earlier developmental level with a loss of many of the good habits that have been learned, the development of aggressiveness associated with destructive tendencies, or in temper tantrums. If the home has in the past offered security, then simple reassurance is enough. It is unwise to try to keep the war away from these children if they ask questions about it. The unknown holds grave terrors for children of this age. One young four-year-old whose mother talked

(Continued on Page 94)

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SCARLET FEVER STREPTOCOCCUS TOXIN

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In infected, susceptible persons, "Scarlet Fever Streptococcus Antitoxin *Lederle*" may be injected for prophylaxis, and a passive immunity is produced, lasting about two weeks. However, this temporary measure must be followed one week later by active immunization for lasting protection.

"Scarlet Fever Toxin *Lederle*," for active immunization, is a highly potent and carefully standardized preparation. Complete immunization can be achieved only if a full course of undivided doses is given. By such a method 90-95% of individuals may be rendered Dick-negative, the majority remaining so for as long as 12 years[4].

Some recommend that every child be given a Dick test on entrance to school or an institution, and that a record be kept of the result[5]. Dick-testing and immunization of susceptible individuals is indicated[6] in emergencies such as threat of an epidemic. It is a timely procedure for the large numbers of children who are being moved, in many parts of the country, into over-crowded war-plant areas.



Sterility Test

[1]KOJIS, F. G.: Am. J. Dis. Child. 64:93 (July), 1942; 64:145 (Aug.) 1942.
[2]TOP, F. H., and YOUNG, D. C.: J.A.M.A. 117:2056 (Dec. 13) 1941.
[3]PALMER, L.: Kentucky M. J. 40:254 (July) 1942.
[4]MELNICK, T.: Arch. Pediat. 59:90 (Feb.) 1942.
[5]HOYNE, A. L.: Illinois M. J. 81:12 (Jan.) 1942.
[6]THOMPSON, C. G.: Connecticut M. J. 5:736 (Oct.) 1941.

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(Continued from Page 92)

about working at the Willow Run Bomber Plant became quite concerned about this possibility. This child did not mind having the mother work elsewhere, but the Bomber Plant was a symbol of the war, a threat to security, therefore, could not be tolerated. Most of us have little realization of the amount of thought and brooding which may go on even in a very small child's mind. Idle or careless words, even if spoken in jest, can easily upset the security of a youngster.

In the elementary school group the mechanism of disturbed behavior is essentially the same; that is to say, recognized or unrecognized feelings of insecurity, but the outward manifestation may assume a different form. There may be a desire to run away from the reality of the situation and to deny the existence of danger. This, of course, is unhealthy and should make the parent or teacher suspicious of the development of a serious mental illness. More commonly, however, the insecurity is expressed in aggressive, hostile or destructive behavior. The playing of war games with the actual danger of injury to playmates may be an expression of hostility to the environment. Here simple reassurance is not sufficient. Hostility and aggressiveness, the behavior activated by anxiety must be directed into useful channels. Children of this age take to constructive activities with enthusiasm if they feel them to be of value. Useful wartime activities, such as sale of war stamps or collection of scrap metal is good mental hygiene.

The problem of the adolescent is more complicated. He or she is old enough to make active plans for the future. The war is a direct threat to these plans. We must all accept the reality of life and build for the future no matter what our present situation may be. Constructive activities tend to dissipate pessimism and pessimism may be a very destructive attribute. In the adolescent the fear and anxiety which produces insecurity may take the form of doubt about the future, the ability to continue in school, the possibility of establishing a future home. As the adolescent matures emotionally there is normally some resentment against authority. The great restriction of his usual activities during wartime tends to increase this resistance to authority. Adolescents react to war in many different ways—some consider it useless to continue school, wanting to get jobs while good jobs are offered; some enter into early marriages; others express aggression, hostility and rebellion against authority by the formation of delinquency patterns. Delinquency has seriously increased in England and is on the increase in this country. In our plans for the future, these factors must be kept in mind. The children of today are the citizens of tomorrow and even though we are thoroughly engrossed in war activities, our planning councils must make blue prints for the future which will include the normal development of our children. The children of today deserve an important place in our plans for the future.

War is a new and disrupting factor in our lives. It upsets our everyday living by the development of restrictions, routines and disciplines that are new to us in our democratic way of life. There are destructive factors which are separate and distinct from injury to men and property. There is an increase in environmental stress. Everyone is required to accept more responsibility. There is more work with less leisure than before. There is a continuous threat to the emotional, physical and economic security of the individual which leads to the development of psychiatric disabilities. Misconceptions and rumors, feelings of mistreatment or inequalities are bound to exist and in some who have feelings of this sort as a part of their personality, such feelings may become markedly exaggerated. All of these things may lead to the development of misdirected, aggressive and hostile attitudes. Some mental ills may be prevented by the maintenance of as great a feeling of security as possible. In the very young child this may be accomplished by simple reassurance. In the grade school child, the adolescent and the adult, the sense of security may be stimulated and improved by the direction of energy into useful channels. Good care of the individual's physical needs with regular habits is wise. Sound rational thinking is important. Confidence in ourselves and our leadership with a refusal to listen to or spread gossip or rumors is necessary. Prevention is always better than cure, so with the first sign of maladjustment in child or adult, immediate steps should be taken to prevent more serious problems.

A DOCTOR'S PLEA IN WARTIME

The doctor's life, in times like these,
Is not exactly one of ease.

For, on the home front, each M.D.
Is busier than any bee!

He's shouldering the burden for
The other docs, who've gone to war.

This leaves your doctor precious little
Time to sit around and whittle.

And indicates the reason why
You ought to help the poor old guy.

HOW?

1. By keeping yourselves in the best of condition
   Thus avoiding the ills that demand a physician.
2. By phoning him promptly when illness gives warning,
   But—unless very serious—waiting till morning.
3. By cheerfully taking whatever appointment
   He makes for prescribing his pills or his ointment.

4. By calling on him where he works or resides
   Instead of insisting he rush to your sides.
   (Of course, he'll come 'round when there's need for his service
   But spare him the trip when you're nothing but nervous.)

5. And, last but not least, you can help in this crisis
   By carefully following the Doctor's advices.

If these commandments you'll adhere to
A doctor's heart you will be dear to!

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Newer Treatment of Common Skin Diseases*

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■ Twenty-five years or more have passed since a prominent Philadelphia dermatologist, now deceased, jokingly referred to his specialty as one in which patients never call their physician at night, never die and never get well. As a practicing dermatologist in Philadelphia this saying was quoted to me so many times and so often used as a basis for patients assuming that their particular skin disease could never be cured, that I felt compelled in 1938 to write an editorial for the *Medical World* on "The Curability of Skin Diseases." Present-day statistics indicate that the ten most common skin diseases seen in any physician's office are as follows: eczema (including dermatitis venenata), acne vulgaris, scabies, ringworm, seborrhea, impetigo, psoriasis, urticaria, verrucæ and skin tumors. These are not given in the exact order of their comparative frequency, but collectively they comprise perhaps 60 to 75 per cent of all skin diseases. Since the turn of the century remarkable studies have been made in the treatment of skin diseases, and numerous of the above named conditions which were regarded as responding poorly to treatment or regarded as entirely incurable, are now either curable or capable of control to an extent that severe complications or irremediable sequelæ need not occur. The following review covers a few of the newer ideas concerning these conditions, and both old and new methods of treatment follow.

Eczema and Dermatitis Venenata

For centuries the term "eczema" was used to include a multitude of skin diseases and constituted the scrap heap of dermatology. Time has seen the salvaging from this scrap heap, of a number of diseases of the skin that are now recognized as separate entities—such as scabies, ringworm of the hands and feet, dermatophytids, seborrhea, infectious eczematoid dermatitis, monilia infections and monilids and various types of contact dermatitis which are still often listed as eczemas (occupational eczema, etc.). This subject is too broad to possibly consider in the allotted time all the various clinical phases and therapeutic procedures, but it may be safely stated that newer concepts of eczema have made virtually all types more amenable to study and treatment, and there are few cases in which relief cannot be promised even though a cure may be impossible. Improvement in the means of detecting etiological factors by means of percuta-

*Presented at the Seventy-Sixth Annual Meeting of the Michigan State Medical Society, Grand Rapids, Michigan, September 19, 1941.

neous, intracutaneous and patch tests, often leads to the elimination of causes and decreases the likelihood to further attacks. Consideration must be given to the relationship of outbreaks to (1) ingestion of certain foods and other allergens, (2) articles of clothing (silk, wool, rayon, nylon, et cetera), (3) dusts, (4) overwork and worry, and other less common factors. In all atopic types of eczema, and particularly in eczema of children, elimination diets such as those suggested by Rowe, are worthy of trial. The development of *soybean* milk as a substitute for milk in infant feeding has contributed much to the successful treatment of those cases of infantile eczema that are traceable to cow's milk.

Acne Vulgaris

One of the most easily recognized of all skin diseases, acne vulgaris, is at the same time one of the most neglected and my office statistics show that in the majority of cases which finally seek medical aid, either the family doctor or one or both parents, and at times all three, have taken the attitude that acne is an unavoidable accompaniment of adolescence and must be suffered in silence until nature finally brings about a spontaneous cure. By the time that a spontaneous cure takes place (and sometimes this never occurs), a fairly large percentage of the affected youths will have suffered marked pitting and scarring, equal at times to that produced by smallpox. They may have also developed a persistent inferiority complex. I have always urged that adolescent youths with acne should receive the same prolonged care of their skin that is given to the straightening of crooked teeth and I know that the result will be equally gratifying and the expense considerably less. Neglect by the medical profession drives many young boys and girls to self-medication or to seeking relief in barber shops, beauty parlors, drug stores and other sources not qualified to deal with the medical aspects of the disease. The modern day treatment of acne vulgaris requires consideration of:

1. Developmental changes and endocrine factors.
2. Dietary regime and attention to the proper functioning of the gastro-intestinal tract.
3. Attention to the general health (Tonics, Vitamin D or Vitamin B Complex)
4. Proper hygiene of the skin. (In most cases this means the thorough use of soap and water and removal of blackheads, preferably by the physician.)
5. Control of local infection (sulphur or mercurial lotions or ointments). (Vaccines or foreign protein therapy at times.)
6. Control of overactive sebaceous glands (x-ray therapy in proper hands is perfectly safe and at times the only methods of controlling sebaceous gland overactivity).
7. Attention to the scalp.

(An oily or a scaly scalp is a definite source of aggravation to acne.

I would urge upon every physician—Begin the treatment of all cases of acne as soon as recognized, with every weapon possible except x-ray, which should be immediately employed if the eruption proves intractable and before irreparable scarring results.

Scabies

Scabies, usually easily cured with sulphur, has recently been treated with newer and more elegant methods including (1) sodium thiosulphate plus dilute hydrochloric acid; (2) benzyl benzoate and (3) rotenone. According to the recent studies of Ingels the safety margin of the benzyl benzoate cure has a great advantage over the sodium thiosulphate cure, and consists of rubbing into the skin with a soft brush a solution of equal parts of benzyl benzoate, sapo mollis and isopropyl alcohol.

Ringworm

The type of ringworm infection seen chiefly today is that involving the hands and feet, and it is interesting that very little was known about this type of fungus infection until the present century. Since World War I ringworm of the hands and feet has become so common that it is now estimated that approximately 75 per cent of all individuals have been infected at one time or another. Early recognition and proper treatment of this infection may prevent the development of one or several complications which include (1) the development of a generalized rash or dermatophytid, (2) lymphadenitis, (3) cellulitis, (4) phlebitis and (5) erysipelas. While all types except that caused by the Trichophyton purpureum may be regarded as curable, no cure-all has ever been found. Treatment depends chiefly upon the type and stage of the eruption and is briefly as follows:

A. *Vesiculo-bullous* (acute type)
   1. Incision of all lesions to promote outward drainage

2. Foot baths or continuous wet dressings of potassium permanganate (1-4000 solution), saturated boric acid solution or liquor aluminum acetate (Burow's Solution)
3. Avoidance of all strong applications such as Whitfield's Ointment

B. *Dry squamous and intertriginous type* (usually secondary to vesiculo-bullous)
1. X-ray therapy: one or several fractional doses
2. Castellani's paint
3. Desquamating ointments (one half to full strength Whitfield's Ointment)

C. *Chronic hyperkeratotic type*
1. Strong desquamating ointments. An ointment composed of equal parts of salicylic acid and lanolin applied on gauze and bandaged in place for three-day periods often acts miraculously.

Refined proprietary modifications of such simple formulas as Whitfield's Ointment may be employed successfully at times, but one should always know the ingredients and their relative strengths in such preparations and employ them only at the proper time.

Seborrhea

Controversy over the etiology of seborrhea, which may vary from a simple scale or dandruff of the scalp to a severe eczematization involving scalp, face, ears and even the trunk, still rages. Sulphur, used for generations, continues to be the sovereign remedy for seborrhea of the scalp and if the outbreak in the scalp is controlled the eruption elsewhere is fairly easily controlled by simple, mild, antiseptic remedies. An effective remedy is sulphur and salicylic acid incorporated in a relatively new base as follows:

℞	Sulphur ppt.	℥i
	Acidi Salicylic	℥ss
	Aquaphor	℥ i/i

If this is applied to the scalp each night and followed by a morning shampoo, seborrhea soon disappears and may be completely controlled by an occasional application. Recent studies indicate that the development of seborrhea is favored by a deficiency of vitamins B and possibly narrows down to a deficiency of pyridoxine or Vitamin B_6. Vitamin B Complex has been found to be of value in the treatment of seborrheic conditions.

Impetigo

The medical profession was long dependent upon mercurials for treatment of impetigo and these are still effective remedies, but too often produce a secondary dermatitis. Recent years have seen the introduction of gentian violet used either in a 1 or 2 per cent aqueous solution or a 1 or 2 per cent paste, but this remedy is most unsightly. Recent studies indicate that sulfathiazole incorporated in 5 to 20 per cent strength in a jelly or vanishing cream base is both effective and non-irritating. Other skin infections such as coccygenic sycosis, infectious eczematoid dermatitis, pustular acne and furunculosis also respond to sulfathiazole applied locally and there is evidence that applied as a powder it may prevent infection in burns and thus promote healing. There is also some evidence that the green chlorophyll of plants is an effective agent in skin infections. It has the advantages of not being unsightly and never provoking irritation.

Psoriasis

Of the ten most common dermatoses only psoriasis must be regarded as entirely incurable and will probably continue to be incurable until the etiology is known, but satisfactory therapeutic results are usually obtainable, even though recurrence is the rule. From the standpoint of therapy, psoriasis should be considered as (1) active or (2) inactive. In the active stage the patches are inflammatory, often widespread with new lesions constantly appearing and may be accompanied by local discomfort and itching. In this stage the usual psoriasis remedies such as arsenic internally and chrysarobin and its derivatives externally either aggravate the eruption or are ineffective. Measures used to change the active to the inactive stage consist of (1) Rest, (2) Low-fat or low nitrogen diet, (3) Autohemotherapy (withdrawing 10 c.c. of venous blood from the patient's arm and its immediate reinjection into the gluteal muscles), (4) colloid, sulfur or tar baths and (5) the local application of simple soothing ointments. Once the inactive state is reached, chrysarobin or its derivatives such as neorobin or anthrarobin may be employed in gradually increasing strengths. Vitamin D in massive doses, for a brief time highly extolled, has proved disappointing. Recently, Madden has recommended injections of Vitamin B_1 and Liver Extract. Soybean lecithin by mouth is the most recent recommendation.

Urticaria

Acute urticaria has been and is now a relatively simple therapeutic problem and is often

cured by home measures including diet and free elimination. Chronic cases are often difficult of solution. From the standpoint of etiology the majority are either due to food allergy, or disturbances of the nervous system and must be treated accordingly. Recently, considerable interest has centered in treatment with histaminase. Of seventeen cases treated with histaminase by Laymon and Cumming at the University of Minnesota, 10 were cured, 2 were improved and 5 were unimproved. Histaminase by mouth has not proved of demonstrable value.

Verrucae

Several clinical forms of warts are recognized, most important of which are the common wart or verruca vulgaris, the plantar wart, and the flat or juvenile wart. There are laymen and even physicians who have claimed the ability to cure warts by auto-suggestion. (My own experience is that it commonly fails.) The past quarter-century has seen the following medications suggested for general treatment of verrucæ; (1) Neoarsphenamine intravenously; (2) Bismuth intramuscularly and injected directly into the wart; (3) Sulfarsphenamine intramuscularly; (4) injections of distilled water; (5) intracutaneous injections of cow's milk; (6) autohemotherapy and (7) vaccines made of ground up warts.

Plantar warts are often troublesome and may require trial of several treatments before cure is obtained. I have found the best treatment to consist of paring away the tissue until small bleeding points appear, followed immediately by unfiltered x-ray or radium therapy, preferably the latter. Large plantar warts may be reduced in size by repeated light fulguration and finally x-ray or radium. Surgery is the court of last resort but may be resorted to for extensive growths or lesions that may have been overtreated by x-ray or radium. Grafting is usually required following removal of the growths.

Skin Tumors

Nevi, Keratoses and Skin Carcinoma

Under this heading could be included a large number of conditions of the skin but discussion here will be limited to nevi and malignancies. Of the nevi often designated as "birth marks" and appearing in the infant, interest centers chiefly around vascular lesions. Port-wine marks remain an unsolved problem but elevated vascular nevi may now be treated by (1) radium, (2) carbon dioxide snow, (3) sclerosing injections and (4) surgery. Small lesions such as the so-called strawberry marks are best treated by carbon dioxide snow, but larger lesions such as the cavernous angioma respond better to radium or sclerosing injections or a combination of these two therapeutic procedures. Treatment should be instituted as soon as the lesions are recognized as they tend to enlarge as the child grows.

The dermatologist does not recommend that other types of nevi, such as nevus pigmentosus or nevus pilosus necessarily be removed, but all nevi subject to chronic irritation are best eradicated and those of blue-black color should be removed by wide excision because of the danger of melanoma.

There is no excuse today for the development of incurable skin cancer. Any growing persistent lesion of the skin in an elderly patient should be regarded with suspicion and preferably removed and examined microscopically. The development of the method of destroying skin growths by electrofulguration and their removal with electric cutting currents have advanced to such a degree in the past 20 years that removal of skin growths is today a relatively simple procedure. Also the understanding of the method of application of radium and roentgen rays is greatly advanced and both are at times of great value in the treatment of premalignant and malignant conditions of the skin in expert hands.

Comment

The purpose of this presentation is to show that of the skin diseases most commonly seen, virtually all may be helped or cured by modern day methods of treatment. The day when dermatology was considered a mystic science, poorly understood and unworthy of careful consideration by the general practitioner of medicine has passed. Virtually all medical schools today recognize the importance of the subject in relation to medicine and surgery and indeed all branches of medicine have separate departments for its teaching. Remember—no patient is more grateful to his physician than one who is relieved or cured of an unsightly troublesome disease of the skin.

Regional Enterocolitis*

A Report of Thirty-one Cases

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The authors report thirty-one cases of regional enterocolitis and emphasize investigation of recurrent cramplike pains for this condition. The earliest roentgen signs consist of abnormal irritability and disturbed mucosal pattern of the ileum, later the ileum is rope-like in appearance. The pre-operative diagnosis is often appendicitis and the authors advocate adequate incision in order to explore for regional enterocolitis, Meckel's diverticulitis, mesenteric adenitis and pelvic disease.

A thorough acquaintance with regional enterocolitis will prevent much morbidity and mortality in its management. Early cases do satisfactorily on medical regime, radical resection being reserved for the advanced cases with stenosis and complications.

A distinct disease entity, which they named regional ileitis, was described by Crohn, Ginzburg and Oppenheimer[4] in 1932. They claimed no priority in observing such a condition, as previous reports had described several ill-defined groups of benign granulomas of the intestine; however, they were the first to recognize it as a definite clinical and pathological picture. Since then many reports of this disease have been published, not only under its original name, but also as regional enteritis, terminal ileitis, non-specific ileitis, non-specific ileocolitis, and others.

We chose the term regional enterocolitis because of the location involved in our cases:

Ileum and colon	14
Ileum alone	11
Colon alone	5
Ileum and jejunum	1

The cases in this series were all observed in Harper Hospital, or in the private practice of one of us. All but nine cases were under our personal observation.

The purpose of this paper is not only to report our experience with this disease, but also to emphasize a conclusion which we think is important. This condition is not entirely a surgical problem, as 25 per cent of our cases, after an early diagnosis, show no extension of the disease under judicious medical management and observation.

TABLE I. AGE INCIDENCE

Age	No. Cases
10-19 yrs.	3
20-29 yrs.	11
30-39 yrs.	8
40-49 yrs.	6
50-59 yrs.	3

Age, Sex and Race

Table I gives the age incidence of the onset of the disease, the average age being thirty-two years. This confirms the findings of previous observers, that younger people are the more frequent victims, 72 per cent of our patients being under forty years of age. This is in contrast to the age incidence encountered in carcinoma.

Nineteen of our thirty-one cases were females. Eight were Jewish and there were no negroes. The sex and racial incidence, we feel, is of no importance.

Etiology

As none of the theories regarding the etiology of this disease have been substantiated, and as there is no constant factor which might be considered as etiological in studying our group of cases, we will eliminate further comment.

Pathology

The early cases were characterized by a thickened, edematous, soggy, doughy, mottled appearance of the affected bowel. There was no free peritoneal fluid or serosal exudate present in any of the early cases. There were no microscopic examinations in these early cases, as conservative treatment and observation were deemed advisable. In one case involving the jejunum and ileum in skip areas the mesenteric glands were much more enlarged than in the other cases.

The advanced cases varied in appearance from a thickened, rigid, hose-like bowel with thick edematous mesentery, to a large inflammatory mass covered with a layer of fibrinopurulent exudate.

*From Harper Hospital, Detroit.

TABLE II. SYMPTOMS AND SIGNS

Symptoms and Signs	Resected Cases	Medically Treated Cases
Abdominal pain	100%	100%
Abdominal pain crampy in character	93	77
Diarrhea	35	33
Constipation	50	44
Alternating constipation and diarrhea	10	11
Normal bowel movement	5	11
Vomiting	50	33
Weight loss	91	33
Emaciated appearance	52	11
Tenderness	100	100
Abdominal mass	77	0
Visible peristalsis	5	11
Fever (100° or over)	64	33
Anemia	65	14
Leukocytosis	43	22
Fistula	18	0

Three of the last type of cases had fistulæ present. When the cecum was involved, the thickening of the bowel wall was greatest at the ileocecal valve. The disease, when involving the cecum and ascending colon, showed more hyperplasia than at other locations, and the differentiation from carcinoma was difficult. The one case involving the left colon was characterized by extensive thickening of the bowel wall and mesentery. The lumen of the involved segment was usually constricted, the mucosa edematous and distorted, and often ulcerated.

Microscopically, the thickening is found due partly to muscular hypertrophy and partly to varying degrees of chronic non-specific granulation tissue in the submucosa, muscularis, and subserosa. This granulation tissue contains nodules of fibroblasts, histiocytes, and often foreign body giant cells of the Langhans type. These may be densely grouped as to suggest tubercles and lead to confusion with tuberculosis. The irregular ulcerations are lined with similar granulation tissue infiltrated with leukocytes. The rest of the mucosa may have zones of atrophy and polypoid hyperplasia.

Several of our cases were first diagnosed as hyperplastic tuberculosis, but when the pathological changes associated with regional enterocolitis became a common and familiar picture, the diagnosis was evident.

Symptoms and Signs

The symptoms vary from mild abdominal pain to severe colic, and the appearance of the patient from health to the most striking emaciation. Crohn has described four clinical types:

1. Signs of acute intra-abdominal inflammation (resembling acute appendicitis).
2. Symptoms of ulcerative enteritis (diarrhea).
3. Stenotic phase (with symptoms of subacute incomplete intestinal obstruction, violent cramps, visible peristalsis, mass in lower right quadrant).
4. Persistent fistula.

In analyzing the symptoms in our patients, we thought it worth while to divide the cases into those that were far enough advanced to require resection (twenty-one patients) and those in whom resection was not performed.

It will be noted in Table II that all patients had abdominal pain and abdominal tenderness. Most of the resected cases had crampy abdominal pain, as did a high percentage of the non-resected cases. We consider the presence of crampy abdominal pain one of the most significant features of the history. The crampy pain is usually referred to the umbilical region and sometimes, depending on the degree of obstruction, is very severe in character. The presence of diarrhea unaccompanied by blood or pus in the stools is also suggestive of this condition, although the disease occurs often in the presence of normal bowel movement or even constipation. Weight loss, emaciated appearance, mass and visible peristalsis all indicate an advanced stage of the disease.

Differential Diagnosis

Fourteen (47 per cent) of our cases were originally operated upon with a preoperative diagnosis of acute or subacute appendicitis. The appendix was removed in eleven cases and the diseased bowel was resected in three cases.

An analysis of the symptoms in this group



Fig. 1 (*a*). Four-hour roentgenogram showing marked irritability of terminal ileum with rapid passage of the barium through this segment of the bowel. (This patient had previously had an appendectomy with relief of symptoms.)



Fig. 1 *(b)*. Barium enema study showing involvement of ileum just proximal to ileocecal valve with some early involvement of cecum. (Chest examination of this patient revealed no tuberculosis.)

show them to be indistinguishable from those of acute appendicitis. All patients complained of abdominal pain, most cases had nausea, vomiting, tenderness. A mass and diarrhea were present in one case and a history of previous diarrhea was given in another, both of which are by no means rare in appendicitis.

There were no button-hole incisions made in any of the cases, otherwise the true nature of the disease might have been overlooked. This is another argument in favor of an adequate incision when operating for appendicitis, as one might easily miss not only regional enterocolitis but numerous other conditions, such as Meckel's diverticulum, mesenteric lymphadenitis and pelvic disease.

The disease must also be differentiated from non-specific ulcerative colitis, intestinal tuberculosis, neoplasms of the large and small bowel and other organic and functional conditions causing diarrhea. In spite of careful study of the patient, laparotomy and pathological examination are often necessary to differentiate regional enterocolitis from other conditions which simulate it in many details.

Roentgenologic Observations

While the clinical impressions and symptomatology may suggest the diagnosis of enterocolitis, its diagnosis pre-operatively can only be established by roentgen studies, and then only if a careful study is made with particular attention directed to the small intestine and the region of the ileocecal valve. Sproull[11] has called attention to the fact that in the past years the roentgen study of the small bowel has been neglected. However, with the studies of Pendergrass,[9,10] Golden,[5] and others, there has been a marked revival of interest in the normal as well as in the pathological appearance of the small bowel pattern.

In the presence of cramplike abdominal pain, the first method of study should be by means of



Fig. 2. Four-hour roentgenogram showing early lesion in terminal ileum with narrowing of lumen and irritability of small intestine. (Limited lesions such as this may be easily overlooked.)

a barium enema. By this study any obstructing lesion of the large bowel can be eliminated as the cause of pain and often the ileocecal valve is incompetent and the terminal ileal loops may be filled quite easily with the barium enema, and if the terminal ileum is involved the diagnosis is established and no further study is needed. Often in these cases with extensive involvement of the small bowel there may be partial obstruction, and barium given by mouth may complicate the clinical picture by transforming a partial obstruction into a complete one. If, however, a diagnosis cannot be established by means of the barium enema, small amounts of barium and water may be given or a Levine tube may be passed into the duodenum and small amounts of barium suspended in water can be introduced into the intestine and one-half or hourly studies made in order to watch the progress of the meal through the small intestine, making note of any abnormality in the pattern, size of the lumen and distribution of the small intestine within the abdominal cavity.

The earliest changes which may be recognized in the roentgen study are those in the normal mucosal pattern associated with an abnormal irritability of the involved portion of the intestine, causing the barium to pass quite rapidly through that portion of the intestine (Figs. 1*a*, 1*b* and Fig. 2), so it is of considerable importance that great attention be paid to the motility of the meal. Often the localized hypermotility and the slight but definite change in the intestinal mucosa are the only clues to the positive diagnosis. In the more advanced cases, where the involvement is more extensive and the lumen of the intestine is more encroached upon, there may be and usually is a delay in the passage of the barium meal through the involved areas of the intestine (Fig. 3*a*), and the characteristic rigid lumen with the cord-like appearance that has been called attention to by Crane[2] and by Kantor[7] (Fig. 3*b*). As might be expected, the disease may not be continuous in its involvement of a given portion of the bowel, but normal bowel pattern may be interspersed.

In addition to the narrowing of the ileum, there is obliteration or change in the normal mucosal markings and at times a polypoid appearance of the mucosa of the bowel may be noted, and often the ulcerations in the ileum may be so extensive and acute as to cause an extreme hypermotility of the meal. As has been pointed out, with such an involvement of the ileum where the ileum is narrowed, one might expect dilatation of the intestine proximal to the involved area. This condition, however, does not usually occur as the small intestine proximal to the involved area may be of normal size, and when the cecum is involved, in addition to the terminal ileum, the cecum is often constricted and somewhat irregular in outline, the cecum assuming a more or less conical shape in relation to the ascending colon, and there is often an absence of the haustral markings.

When the colon itself is extensively involved it also shows constriction with mucosal irregularity, and the colon is contracted (Figs 4*a* and 4*b*). The ulcerative process in the colon is manifested roentgenologically by spasm, irritability and localized hypermotility of the involved segment of the bowel so that it retains very little barium either when the barium is given by mouth or enema studies are made. In such cases as these, the roentgen findings suggest those of a tuberculous enterocolitis and this is not unexpected in view of the similarity of the gross pathologic lesions in these two conditions.



Fig. 3 (*a*). Four-hour roentgenogram. Note the narrowed ileal loops with the delay in passage of barium through the small intestine and the absence of dilatation of the loop proximal to the diseased areas.



Fig. 3 *(b)*. Barium enema study revealing a patent ileocecal valve and a narrow rigid lumen of terminal ileum with the characteristic cordlike appearance.

The jejunum itself is rarely involved, though in one of our cases there was involvement of the jejunum, which exhibited the same characteristic changes as are observed in the ileum, the lumen being quite irregularly narrowed and the normal mucosal pattern completely replaced with polypoid like excrescences.

In those cases presenting themselves with external abdominal fistulæ, Jellen[6] has suggested a very helpful diagnostic procedure in that if the patient is given indigo-carmine by mouth one may readily determine whether or not the tract communicates with the lumen of the intestine, and if it does, the sinus tract may be injected with lipiodol under roentgenoscopic control in order to note its extent and direction. Jellen has noted the difficulty of demonstrating internal fistulæ by the barium meal or enema, and he has called attention to a very important diagnostic point, namely that the presence of ileosigmoidal fistulæ in young adults should lead one to suspect a primary granuloma of the ileum rather than cancer of the sigmoid.

While the roentgen picture of terminal ileitis may be characteristic of the disease, it is not pathognomonic as has been pointed out by Kantor[7] and others; however, in the presence of an involvement of this type without roentgen evidence of tuberculous involvement of the lungs, one may be reasonably certain that the changes seen in the intestine are due to regional ileitis rather than to tuberculous enteritis which it simulates to such a marked degree, though occasionally tuberculous enteritis may occur without any associated pulmonary involvement.

Resected Cases

Table III lists data on resection operations performed on twenty-one patients. The original operation consisted of a one-stage resection in four patients, a two-stage resection in nine patients and a Mikulicz type of resection in eight patients. There were three recurrences (14 per cent) following these twenty-one resections, necessitating a second resection, which emphasizes the importance of searching for skip areas above

the main area involved, and resecting far enough above the diseased area.

All patients who had resection of the diseased area at the original operation recovered from section, after a preliminary "short circuit" when the patient is in apparent good health. Their recommendation is not to delay resection because of possible exacerbation of the disease.

TABLE III. RESECTED CASES (24 RESECTIONS ON 21 PATIENTS)

Type of Resection	Number Patients	End Result	Duration of Followup
			Years
One-stage primary ileocolostomy	4	3 well, no symptoms 1 Recurrence	2½, 2½, 2½ 2**
Two-stage ileocolostomy first, resection of ileum and right colon second	7	3 well, no symptoms 2 well except moderate diarrhea at times 2 Recurrence	13, 3, 1 6½, 3 1½**, 1**
Resection and ileostomy first, ileocolostomy second	1	1 well, no symptoms	3½
Ileostomy first, resection and ileocolostomy, second	1	1 well, small fistula	2¾
Multiple-stage Mikulicz resection	8	7 well, no symptoms 1 well except moderate diarrhea at times	9, 5, 4½, 3 2¼, 2, 2 2¼
OPERATIONS ON RECURRENT CASES	3		
Two-stage operation, ileocolostomy first Resection of ileum and colon second		1 well, no symptoms	5¾
Ileocolostomy		1 well, except moderate diarrhea at times	1½
Ileocolostomy		1 died of peritonitis postoperatively	

**Time between first and second operations.

the operative procedure. The operations were in general not difficult to perform, nor was the intermediate postoperative course stormy. The interval between the anastomosis and resection in most of the two-stage cases ranged from eleven to forty days.

Our patients have been followed for one to thirteen years to determine the end results which are shown in Table IV. All the patients treated by one of us (L.B.A.) are alive, demonstrating that the prognosis is somewhat dependent on acquaintance with the disease.

We have no patients with a remaining blind loop. Our judgment here is confirmed in the experiences of Brown and Donald,[1] who deal with the problem of whether or not to delay re-

TABLE IV. SUMMARY OF END RESULTS IN RESECTED PATIENTS

Well	14
Well, but tiny fistula	1
Well except for moderate diarrhea	5
Died of peritonitis after second resection	1

Indications for Resection

When a case is diagnosed by roentgen ray or laparotomy in the early stages of the disease and conservative treatment is deemed advisable, it should be kept under careful clinical and roentgenographic observation. If the symptoms do not abate under medical management and if



Fig. 4 *(a)*. Barium enema study showing extensive involvement of terminal ileum, cecum, ascending and first part of transverse colon.



Fig. 4 (*b*). Examination after expulsion of barium enema revealing characteristic cordlike appearance of terminal ileum and the narrow contracted cecum, ascending, and proximal portion of transverse colon.

there is evidence showing the disease is extending, such as sepsis, increasing anemia and weight loss, and partial obstruction, surgical intervention should be advised. The presence of a mass, abscess or fistula indicate surgery.

We feel that all cases of the disease except the mild early type are surgical.

Type of Operation

We agree with Crohn[3] that the ideal type of operation for the cure of this disease consists of a two-stage procedure: the first stage, an anastomosis between the normal ileum proximal to the lesion, and the transverse colon, with transection of the ileum to prevent spread of the disease past the anastomosis; the second stage, resection of the ileum and right side of the colon. The merit of this type of operation is emphasized by the statistics of Mayo and Judd,[8] their series showing a mortality of three per cent for this two-stage procedure as compared to a twenty-two per cent mortality for the one-stage operation.

A multiple-stage Mikulicz resection has been utilized in our series with comparable success. We feel that this type of operation is especially indicated in the acute fulminating type of nonspecific ileitis and colitis, where there is an extensive exudate over the diseased loop of bowel with a possibility of impending perforation. It is also adaptable for some cases complicated by fistula or localized pockets of pus, where it is thought that too much absorption might occur between the stages of a two-stage operation.

Cases with Abscess or Fistula

Three cases were operated on for acute appendicitis, the appendix removed, the disease not recognized, fistula resulted and they were later resected. Appendectomy is strongly advised against when there is cecal involvement, due to the probability of a resulting fistula.

If the patient is in the acute fulminating stage, the appendix should not be removed.

If the patient is in an early or quiescent stage and there is no cecal involvement, it is advisable to remove the appendix. If in the subsequent course of the disease the patient has a recurrence of abdominal pain one does not have to worry about a perforated appendix.

One of our patients presented herself with a well-formed pelvic abscess. The abscess was drained, and at a subsequent operation the diseased intestine was resected with cure.

Preparation and After-care

The preparation and after-care of patients operated on for this disease consist of the same routine as followed in any type of bowel resection, namely, maintenance of the fluid and chemical balance, free use of blood transfusions, oxygen therapy, suction decompression with Levine or Miller-Abbott tube, and the sulfonamide group drugs.

End Results in Non-resected Cases

The ten patients who were not resected are tabulated in Table V.

TABLE V. END RESULTS IN NON-RESECTED CASES.

No. Pts.	Method of Diagnosis	End Result	Roentgen Check Since Operation	Duration of Follow-up Years
1	Laparotomy (plus biopsy of ileum)	1 Died on third postoperative day. (Patient 1)		
5	Laparotomy (plus appendectomy)	1 Died of intestinal obstruction 4 mos. after operation. (Patient 2)		
		2 Well (Patients 3 and 4)	One has slight rigidity of terminal ileal segments	2
		1 Mild recurrence 5 yrs. after append'y. Well for past 1½ yrs. (Patient 5)	Negative g.i. roentgen study	6½
		1 Recurrence after 10 yrs. with severe cramps, recurrence lasted 6 mos. Well for past year except moderate diarrhea. (Patient 6)	Spasticity and irritability of jejunal and ileal loops	11½
1	Laparotomy (plus biopsy of mesenteric gland)	1 Well except moderate diarrhea at times. (Patient 7)	Irregularity in calibre of upper segments of jejunum and ileum. Marked improvement from pre-operative roentgen study	2
3	Roentgen examination	1 Well (Patient 8)		1
		2 Feel well except for some gas distress. No diarrhea. (Patients 9 and 10)		1¾
				3

Patient 1 was operated on for a pelvic mass the origin of which was pre-operatively thought to be tubal or ovarian. During the exploration a thick leathery terminal ileum was found. Some adhesions were freed which caused exudation of a small amount of pus. Biopsy of terminal ileum was performed. Death from peritonitis occurred on the third postoperative day.

In patient 2, an acute regional ileitis was discovered at operation in December, 1937. Appendectomy was performed. The patient was rehospitalized in January, 1938, at which time roentgen examination showed involvement of ileum and colon. The patient was rehospitalized again April 8, 1938, with admission diagnosis of partial intestinal obstruction and was treated conservatively with Levine tube, et cetera. Death occurred April 20, no operation, no autopsy. This patient should have been operated on again as there was ample warning of obstruction.

Patients 3, 4, 5 and 6 had laparotomy for what was taken to be acute appendicitis and the diagnosis of ileitis was made by inspection. Conservative treatment

was decided upon as the lesion consisted only of thickness and doughiness, inflammation without exudate, and no evidence of impending obstruction. Appendectomy was performed without subsequent fistula formation. All these patients are well although one had a mild flare-up five years after appendectomy, and the other a severe flare-up ten years after appendectomy.

Patient 7 had roentgen findings of involvement of the jejunum and ileum. At operation two years ago extensive involvement of the jejunum and ileum were found. Appendectomy was not performed but a mesenteric gland was removed. The process was too extensive for resection. A single deep roentgen treatment was given but the patient refused further radiotherapy on account of nausea. There has been marked improvement in her clinical status with no medication. She is well except mild diarrhea occurs if she does not select her food carefully. Roentgenologic check shows marked improvement in roentgen appearance of the bowel. The results of non-surgical management are particularly striking here, as this patient had the most extensive involvement of any in our series.

Patients 8, 9 and 10 presented themselves with the symptoms of subacute or chronic appendicitis. Roentgen examination showed ileitis of mild degree, with such findings as spastic and ribbon-like ileum, disturbance in mucosal pattern of terminal ileum and coarse mucosal folds in colon. None had obstructive signs or the string sign. All these patients are well although two complain of some gas distress from time to time.

Of the eight non-resected patients who are alive, three have no symptoms; one had exacerbation of symptoms but is now well, and four are reasonably well. They lead a normal life but have to be careful about roughage in their food or they suffer from gas distress or mild diarrhea.

If there are no complications, these patients should be treated along the same lines that one treats chronic ulcerative colitis: rest, high protein, high vitamin, high calorie diet, supplemented with vitamins, especially vitamin B by mouth or parenterally, and liver extract.

Summary

1. Thirty-one cases of regional enterocolitis are reported and discussed. The location, age incidence, symptoms and signs, non-resected cases, resected cases, follow-up periods and end results, are shown in tabular form.

2. The most frequent symptom encountered was crampy abdominal pain located at the navel or in the lower right quadrant. Other symptoms suggestive of the disease are diarrhea without blood or pus in stools, weight loss and emaciation, fever, mass in lower abdomen and fistula formation.

3. The earliest roentgen signs of regional enterocolitis are abnormal irritability of the involved portion of intestine accompanied by an abnormal mucosal pattern; in the later stages, there is a narrow rigid lumen with change in the mucosal pattern, at times accompanied by a polypoid appearance of the mucosa.

4. Roentgen ray studies of the gastro-intestinal tract offers not only a means of establishing the diagnosis but also gives a fair idea of the extent of the process.

5. Of the ten non-resected cases, seven were diagnosed by laparotomy and three by roentgenographic examination. Most of them were considered as early cases and conservative treatment was followed. Two patients died, one following biopsy, and the other due to rapid extension of the disease (obstruction). Both deaths occurred because of errors of surgical judgment; resection should have been done. Of the remaining eight patients, 50 per cent are well and 50 per cent have mild symptoms.

6. Early regional enterocolitis is a medical disease, and the cases should be followed with careful dietary supervision and frequent observation.

7. Extension of the disease is an indication for surgical intervention as are complications such as obstruction, abscess and fistula formation.

8. Twenty-one patients underwent the following types of resection: one-stage, four patients; two-stage, nine patients; multiple-stage (Mikulicz) eight patients. Results of primary operation resulted in cure of 67 per cent, great improvement in 19 per cent and recurrence in 14 per cent. In the three cases with recurrence, a second resection was performed, one of which resulted in the only death from operation in our series of resected cases.

9. Radical resection is the treatment of choice for the advanced case, preferably in stages.

10. Removal of the appendix in the early cases is not harmful unless the disease involves the cecum. Removal of the appendix in the advanced

or fulminating cases often results in abscess or fistula.

11. It will be seen that a thorough knowledge of enterocolitis may prevent prolonged illness, multiple operations and even death.

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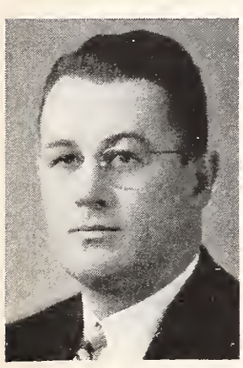
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Glomus Tumor, or Glomangioma

A Case Report

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The glomus tumor is a small, sharply circumscribed lesion involving the cutaneous surfaces of the digits. It is characterized by intense, knife-like, radiating pain caused by trauma or temperature changes.

The rarity of glomus tumor is demonstrated by the fact that in a series of 74,000 surgical specimens, only two cases of glomus tumor were found.

Treatment for this condition is complete surgical removal. X-ray and radium as curative measures have been found useless.

■ The rarity of glomus tumor can be appreciated when careful search of medical literature fails to reveal it defined and described before 1920. Barré, in 1920, suggested its probable histology and demonstrated that it could be removed satisfactorily by surgery. In 1924, Masson exhaustively described the histogenesis of this tumor and demonstrated its constant pathologic appearance.

Jirka and Scudari, in 1936, reported a case which they record as the seventeenth authentic case to be recorded in literature. Furthermore, it is significant that in their series of 74,000 surgical specimens (unselected cases) examined in the Cook County Hospital, only two cases of glomus tumor were encountered. Up to the present time, Jaeger and Kingry estimate that only one hundred fifty cases of this tumor have been reported.

The tumor has been defined simply and completely by Bailey as follows:

"The glomus tumor may be considered an overgrowth of a specific arterio-venous anastomosis and the neurones terminating in it."

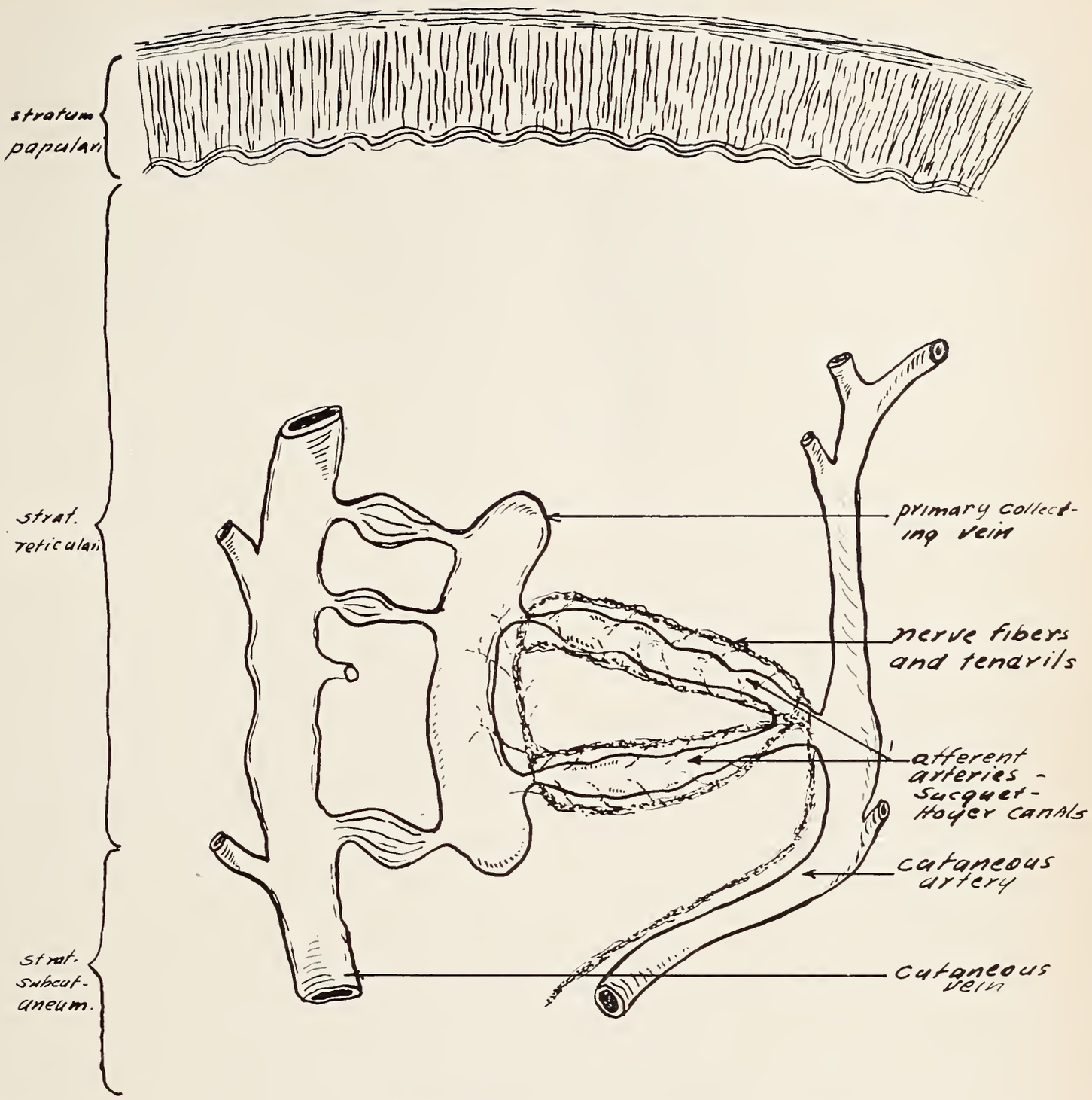
Etiology of this tumor is not known. However, forty per cent of these tumors occur following trauma. Eighty to ninety per cent reported were on the fingers or toes, which, by location, are subjected to trauma or repeated "pressure insults." It is the opinion of the author that we therefore must include trauma as a definite etiologic factor.

The histologic picture of the tumor is constant and characteristic. In the illustration (taken from a drawing by Popoff) the elements of the normal glomus are schematically represented.

Pathologically and microscopically, the glomus tumor is characterized by "hyperplasia of its elements and a new formation of Sucquet-Hoyer canals which are not separately and purposely aligned with the afferent artery and collecting vein, and the mantle of epithelioid cells is not uniform" (Weidman and Wise). The pathologic picture then shows all phases of hyperplasia of the essential elements of the tumor and one element alone may be preponderant in its overgrowth, or a combination of two or three elements may predominate in the hyperplasia. A third possibility is that the entire structure may be involved in hyperplasia.

The signs and symptoms of glomus tumor are nearly always constant and are here mentioned in the order of their importance.

Objectively, the most common site where these tumors are encountered is the subungual region



Relationship of normal glomus to surrounding structures

(Copied from an original drawing by Popoff.) (3)

of the fingers or toes, or less frequently, away from the nail and on the distal regions of the fingers or toes. Their appearance is usually that of an annular or oval lesion, pigmented, either purple, blue, or red, and usually about three by five mm. in diameter. They lie just beneath the nail or just beneath the surface of the skin, and they may be seen occasionally to blanche on pressure. Localized sweating of the immediately adjacent area may be encountered, and the affected digit may be atrophied as a result of disuse.

Subjectively, the tumor is characterized by intense pain either from the slightest trauma, or from changes in temperature. The character of the pain is intense, knife-like, and most generally radiates up the arm or leg from the tumor or "trigger zone." X-ray studies are not helpful in the diagnosis of this condition. Infrequent reports of bone erosion due to pressure are encountered in the literature, but these are by no means constant. The diagnosis must be based on the appearance and location of the tumor as above described and the history of characteristic pain.

The differential diagnosis includes:

1. Small foreign bodies producing pain
2. Subungual exostosis
3. Subungual clavus
4. Subungual papilloma
5. Subungual fibroma
6. Subungual enchondroma
7. Subungual angiokeratoma
8. Neurinoma
9. Hemangioma
10. Endothelioma
11. Angiosarcoma
12. Ewing's tumor
13. Round cell sarcoma
14. Boeck's sarcoid
15. Sutton's tumor
16. Chondrosarcoma
17. Melanoblastoma
18. Carcinoma

The prognosis of this tumor is good. It has never been found to be truly malignant in the sense that its overgrowth extends either by contiguity or metastasis, and recurrence and pain are unknown after complete surgical removal.

As suggested above, the treatment is complete surgical removal. X-ray and radium have been tried as curative measures, but have been found useless. Simple excision wide about the tumor or painful site is sufficient to render immediate cure and relief.

Case Report

C. E. H., white, female, aged thirty-eight, came under observation in the fall of 1941 complaining of pain in the index finger of the left hand.

As the patient was being removed from a delivery room in 1928, she struck the index finger of the left hand against a door. Pain was immediate and lasted about three weeks and then partially subsided. She states that occasionally there was a slight throbbing pain in the finger which came on without trauma.

Four years later, in 1932, the finger became painful to the slightest trauma or temperature change. These stimuli caused pain locally with radiation up the flexor surface of the arm as high as the elbow. Sweating occurred after trauma or temperature change. The sweating was not encountered in the other fingers of the left hand, nor was it seen over the course of the radiated pain. Objectively, there was no lesion discernible, but there was a point on the middle surface of the terminal phalanx of the index finger which, when in any way traumatized, caused intense radiating pain. This "trigger zone" was three by four mm. in diameter.

Prior to coming to the office, the patient, in 1938, had consulted a physician who advised her to have her teeth x-rayed. Following this, six teeth were removed. Pain in the left index finger still persisted. In 1939 she consulted another physician who taped the finger. She was not advised of the nature of the lesion. This physician later advised removal of the distal end of the affected phalanx of the finger to relieve pain. Again, in 1939, another physician was consulted, who also taped the finger and also wanted to remove the affected phalanx. X-rays at that time were taken and this physician advised the patient that "the bone of this finger was honeycombed as a result of infection," presumably from the teeth. The patient refused to have the distal end of her finger removed. Again, three teeth were extracted, and again no relief was obtained from pain.

Physical examination was negative with the exception of the index finger of the left hand, and here no visible lesion was encountered, but as above mentioned, there was a painful point over the medial surface of the index finger of the left hand.

Laboratory procedures, including Kahn test for syphilis, urinalysis, blood count, and x-ray of the affected finger were entirely negative.

The patient was advised to have the painful site removed by surgery under local anesthesia.

Accordingly, on December 12, 1941, the patient was operated on at the Marinette General Hospital. A local anesthesia of 2 per cent novocaine was used, and an elliptical incision was made widely about the painful point and down to the periosteum, and this segment of tissue was removed. The skin was closed by interrupted sutures. Convalescence was uneventful, and since operation, there has been no pain or discomfort in the previously painful area.

The specimen was sent to the Marquette University Department of Pathology, from which the following report was received: "The presence of abundant nerve elements, collections of glomus-like cells around some of the venioles, and one fairly large blood space confirm the clinical diagnosis of glomus tumor."

Unfortunately, the order for microphotograph of the specimen was not received by the pathologist, and the specimen was examined by the freezing technique; consquently, a microphotograph cannot be included in this report.

Summary

A case of glomus tumor of the finger is reported. The case is typical in regard to history and pathologic findings, but atypical in that the tumor presented no external appearance characteristic of its nature. A satisfactory result by surgical removal was obtained.

Conclusions

Small, sharply circumscribed, and intensely painful lesions involving the cutaneous surfaces of the digits should suggest the presence of glomus tumor and should be removed surgically.

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MSMS

No vision and we perish; no ideal and we are lost.
Our hearts must ever cherish some faith at any cost.
A hope, a dream to cling to, some rainbow in the sky,
Some melody to sing to, some service that is high.

—Exchange.

Evaluation of Rectal Examinations*

Harry Carl Guess, M.D.
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M.D., University of Buffalo, 1912; internship at Buffalo General Hospital, 1913-14; 1st Lieut., M.C., Mexican Border Service, 1916; Captain, M.C., 65th Infantry, N.Y.G., 1917-18. Postgraduate studies in proctology at Poly Clinic, 1918; St. Marks, London, 1929 Friedrichsheim Krankenhaus, Berlin, 1929, and Harvard, 1929. Chief Proctologist Millard Fillmore Hospital and Buffalo Hospital Sisters of Charity. Attending Proctologist Edward J. Meyer Memorial Hospital. Consulting Proctologist J. N. Adam Memorial and Lafayette General Hospitals, Buffalo. Fellow American College of Surgeons and American Proctologic Society.

A rectal examination is performed easily and quickly. The pain previously experienced during this examination has been minimized by the various anesthetic means for aiding an operator who studies the anatomy of the rectum and the anal canal.

Reluctance on the part of the patient, especially females, that formerly existed is today almost nil. Can as much be said regarding physicians in making rectal examinations? The more the general practitioner performs rectal examinations, the greater the number of earlier diagnosed cases of cancer will be recorded. Much suffering will be avoided, and a greater number of lives will be saved by adequate surgery. Eighty per cent of all cancers of the rectum may be determined by a digital examination.

Even our present armamentarium, radical surgery, requires early diagnosis for a complete cure of the rectum. Much time and money is wasted when a physician omits a rectal examination.

■ THE purpose of this contribution is threefold:

1. To show the importance of more frequent rectal examinations.

2. To show that every physician has with him, at all times, the two necessary requisites to diagnose at least 75 per cent of all anorectal pathologic lesions.

3. To offer a method which has proven satisfactory in my thirty years' experience for making a rectal examination.

Importance of Frequent Rectal Examinations

Hirschman says:

"It has been been estimated that one patient out of every seven is suffering from some disease, the relief of which would be assisted, or entirely accomplished, by the treatment of pathological conditions discovered only upon a proctologic examination."

Gant says:

"Many individuals suffer from constipation, diarrhea, or other affection of the small intestine, colon, or

*Read before the Seventy-seventh Annual Meeting of the Michigan State Medical Society at Grand Rapids, Michigan, September 25, 1942.

rectum who unnecessarily become chronic invalids because their early symptoms go unrecognized or are considered unimportant."

Mummery states that all too frequent, patients make their own diagnosis of "piles" and have prescribed for them, suppositories and rectal ointments for long periods, before a rectal examination is done.

It is surprising to find, even today, doctors prescribing the much advertised suppositories for any rectal complaint. Carcinoma of the rectum, whether more frequent or more readily diagnosed, is rapidly climbing the ladder of vital statistics, and should be diagnosed very early, if our present armamentarium for the eradication of an intra-cavity neoplasm can be of help.

If this contribution stimulates the rectal examination of just one sufferer from carcinoma, with a resulting successful eradication, then this message will not have been in vain.

Carcinoma of the rectum is a terrible condition, especially when we see it has no respect for age or sex. If a neoplasm is found early, before migration of the neoplastic cells has started, we have surgery, radiation, radium and fulguration, as our means of cure. It is my hope the biochemist will offer more in the near future.

What then is an early case of carcinoma of the rectum?

It is that case which we diagnose soon enough to prevent the horrible results we are seeing.

Requisites for Diagnosis

Every physician is endowed with the two senses: The power to see, and the power to feel, but one must train himself to make a mental picture of the pathologic condition found, with the use of his fingers.

Approximately 75 per cent of all anorectal pathologic lesions may be diagnosed without the aid of the 'scopes. The remaining 25 per cent may be diagnosed with the aid of the anoscope, rectoscope, sigmoid and proctoscope, providing one has training in diagnosing the pathologic condition seen.

It seems unnecessary for doctors to carry around a complete case of instruments without having had the training necessary to interpret their findings. Allow me to show a report on one case which proves that a gun does not make a hunter.

I quote from a hospital chart:

November 2, 1940

"A twelve-inch sigmoidescope passed nine inches without interference beyond which point I was unable to pass the instrument. From mid-rectum to lower third of sigmoid mucous membrane is reddened, edematous, moth eaten in appearance and bleeds very freely. At the upper end of lower third of sigmoid, there is an acute angulation which prevents further passage of sigmoidoscope. There is a continuous flow of bright, red blood, at all times in the upper end of sigmoidoscope. I believe this condition to be an acute inflammatory lesion, either of the acute ulcerative type, or dysenteric in origin. It does not have typical appearance of either one, nor does a lack of temperature, and leukocyte count go with either of these pictured. However, I have never seen a mucous membrane of this type, nor seen described in the literature anything of similar appearance below a malignant lesion. However, I cannot positively rule out malignancy in upper sigmoid, or left colon. There is too much bleeding at this time, to take a specimen.

Advise: (1) Bacteriological studies. (2) Delay in surgery.

November 11, 1940

"Sigmoidoscopic Examination: The lower rectal mucosa is clear with no polyp, or inflammatory reactions. From upper rectum into sigmoid the mucosa is ulcerated, moth-eaten in appearance, and bleeds readily on the slightest trauma. This is definitely an acute ulcerative colitis. X-ray shows two filling defects in right colon."

It so happened that this was a case of avitaminosis. The patient, who was in a serious condition, made a rapid, uneventful recovery shortly after proper treatment.

I do not wish to appear critical when I report this case, because I find conditions which baffle myself, while making daily examinations. The proctologist today, is diagnosing hitherto unknown entities by careful examination of the bowel wall. It was not far back when cascara-stained mucosa of the rectum was labeled "melanoma."

Again, *"Lest We Forget,"* approximately 75 per cent of all anorectal pathologic change is diagnosed by the eyes and the hands.

Seeing is believing, so allow me to show a few slides, tabulating the pathologic conditions:

By Inspection (a)

1. Prolapsed internal hemorrhoids.
2. External thrombosis (so-called external thrombotic hemorrhoids).
3. Peri-anal excoriations.
4. Tumors.
5. Abcesses.
6. Anomalies.

7. Skin tags (postoperative).
8. Pilonidal sinus.
9. External opening of fistula.
10. Discharge of blood, if from the anus or rectum.
11. Skin lesions.
12. Rectovaginal fistula.
13. Scars in female perineum.
14. Loss of sphincter muscle.
15. Fissure and anal ulcer.
16. Base of filled crypt.
17. Pinworms.
18. Postoperative scars.
19. Contour of anal area.

Digital (b)

1. Spastic sphincter.
2. Anal ulcers.
3. Filled crypts.
4. Ulcerative crypts.
5. Hypertrophied papillae.
6. Adenoma.
7. Carcinoma.
8. Fistula opening—internal.
9. Submucous abscess.
10. Spasm of the pyriformis muscle.
11. Anomalies, fractures and dislocations of the coccyx.
12. Hemorrhoids, internal, thromboses or fibrous after injection.
13. Prostatic enlargement, or involvement.
14. Sphincter relaxed from spinal cord lesion.
15. Rectovaginal fistula.
16. Postoperative loss of sphincter muscle.
17. Stricture of the anus.
18. Stricture of the rectum.
19. Pelvic organs.
20. Redundant valves.
21. Redundancy of rectal mucosa.
22. Appendiceal abscess.
23. Postoperative pelvic abscesses.
24. Extrarectal tumors, lympho sarcoma, and metastatic tumors, endometriosis.
25. Intussusception.
26. Fecal impaction.

Anoscopic (c)

1. Internal hemorrhoids.
2. Inflamed crypts.
3. Hypertrophied papillae.
4. Tone and color of rectal mucosa.
5. Adenomas.
6. Carcinoma.
7. Blind fistula.
8. Submucous abscess.
9. Anal ulcer.
10. Stricture of anus and rectum.
11. Rectal ulcers.
12. Presence of mucous or blood.
13. Foreign bodies.

Sigmoidoscopic (d)

1. Tone and color of mucosa, beginning at point 3 inches up to 10 inches from the anus.
2. Stricture of rectum.
3. Rectal adenoma, pedicle or flat base.
4. Rectal and sigmoid carcinoma.
5. Lympho granuloma.
6. Bleeding of lymphatic areas in avitaminoses.
7. Dysentery, acute—chronic.
8. Enlarged valves, edematous.
9. Nematodes.
10. Ulcerations.
11. Blood vessels.
12. Spasticity of rectosigmoid.
13. Intussusception.

Summary

Inspection	18	
Digital	26	
Anoscopic	13—	(4) not by finger.
Sigmoidoscope	13—	(10) not by finger.

With fifty-six conditions accounted for, and fourteen conditions which must be diagnosed by scopes, therefore, we have the approximate figures of 75 per cent by use of hands and eyes, and 25 per cent by use of ano, and sigmoidoscope. Since figures do not lie, and good figures may be liars, I have purposely added the word "approximately." That there may be splitting of hairs regarding the pathologic condition noted is also admitted, but I must bring to your attention the great amount of good that may be done without the use of instruments by use of your eyes and your hands.

Were I to speak of abdominal examination again, the eyes and the hands are the first order before instruments, or roentgenology.

Rectal Examination

A rectal examination is performed easily and quickly. The pain previously experienced during this examination has been minimized by the various anesthetic means for aiding an operator who studies the anatomy of the rectum, and the anal canal.

Reluctance on the part of the patient, especially females, that formerly existed, is today almost nil. Can as much be said regarding physicians in making rectal examinations? The more the general practictioner performs rectal examinations, the greater the number of earlier diagnosed cases of cancer will be recorded. Much suffering will be avoided, and a greater number of lives will be saved by adequate surgery. *Eighty per cent* of all cancers of the rectum may be determined by a digital examination.

Rectal examination is essential for a complete physical examination. There are four steps in

making a rectal examination: Inspection, digital, anoscopic, and proctoscopic and sigmoidoscopic.

Inspection.—Performed with use of the eyes.

Digital.—By the use of the index, or little finger. Intelligent interpretation of the visual sense, and a mind picture made by tactile sense through the index finger will diagnose about 75 per cent of pathologic conditions found in and about the anus and rectum.

Anoscopic and Sigmoidoscopic.—Examinations are made by using an anoscope for the *anal canal* and lower *rectum*. The sigmoidoscopic examination brings into vision the middle, upper rectum and the sigmoid.

A rectal examination should be made with the patient in a position so that the operator, as well as the patient, is as comfortable as possible. Rectal examinations are not any harder than a nose and throat examination.

In my offices the following method is used. Hospital examinations are also carried out in the same manner:

The examining table is flat, covered by a sponge rubber pad, about 2.5 inches in thickness; this for comfort. Paper sheets, towels and tissues have many advantages over linen.

The patient is placed on the left side with both knees drawn toward the abdomen. The thighs are placed at a 45° angle with the body and the legs at a 45° angle with the thighs. This allows space for the necessary materials to be placed below the patient. A cover sheet placed over the patient before clothing is raised or opened.

Four paper towels, three or four soft tissues, a finger cot and lubricating ointment, are placed in the space below the buttocks. A piece of tissue is placed under the patient's hand, and on the right buttock, and the patient is instructed to draw upward with the hand flat on the buttock. Rectal cases are as a rule, very apprehensive, and a little reassurance at this point helps considerably.

At this time, I state to the patient that I shall tell him all the conditions found, regardless of what I find. Should he insist that I do not, I grant his wish, but the great majority of patients want to hear the results.

I can honestly state that many individuals have been made happy and have taken a new lease on life, especially those who have had experiences with cancer of the rectum in their immediate family, when I have informed them that I found no evidence of cancer.

It is not easy at times to inform patients point blank that they have a cancer, but I know this, that once the shock is over, the coöperation, willingness, and expressed confidence is far better than having that feeling that something is being withheld, or that the doctor is not able to diagnose the condition.

I cannot agree with those who whisper cancer; designate all growths as tumors. The people today are well informed regarding cancer. At times it is just as hard for the informer as for the informed. The hardest case in my experience was that of a young man, thirty-two years of age, a father of three children, who was sent with a note asking whether I could do something for that "hemorrhoid" which did not respond to treatment after considerable time. Six months later he died with metastasis in the lung.

This subject could be discussed from many angles, but I have seen but one woman aged fifty-two years, who gave up as it is said, and passed on. This might be called a blessing, as she had an inoperable carcinoma, with a frozen pelvis.

It is my procedure to state to the patient that should there be pain, to inform me and I will stop the examination. Should there be considerable pain, a drop of phenol may be placed on the skin about 1/2 inch behind the anal opening, and about 5 c.c. of 1 per cent novocaine in water may be injected into the subcutaneous tissue.

Press the needle on the spot made by the phenol, and instruct the patient to cough. The needle enters, and the anesthetic may be injected on both sides without removing the needle. Local anesthesia requires a few minutes to act, and the patient is instructed to take his hand from the buttock, for at least five minutes. We are then ready for the first step.

Inspection.—With the patient raising the right buttock, the operator can press on the left buttock and expose the anal region. This examination will reveal whether or not, the sphincter is spastic, whether there are protrusions from the anus, whether these are new breaks in the perianal skin, openings of fistula of pilonidal sinuses, whether there is discoloration, swelling, discharges or blood, excoriations, condylomata, or anal ulcers, skin tags. The anus may be opened to reveal prolapsed hemorrhoids, hypertrophied papillae, or polypoid growths. Instruct the patient to slide the hand forward; the vagina in the female and the scrotal area in the male may then be examined.

Digital.—With the finger cot on the right index, or little finger, place a loop of soft tissue

around the base of the examining finger. Pressure is made around the anus. This will reveal sensitive areas; or inflamed tissue beneath the skin. The examining finger is then placed against the external sphincter with the palm of the operator's hand facing back, and pressure is made toward the symphysis. The patient is then instructed to cough. The sphincter relaxes, and the finger enters the canal. Pointing the finger towards the sacrum, the anal canal is examined and the finger enters the rectum. As the finger goes through the anal canal, we feel for cord-like areas, or depressions.

It is well to keep pressure toward the anterior portion of the anus as a great majority of cases have an anal ulcer in the posterior commissure. The anal ulcer is one of the most frequent and painful conditions found.

As we pass through the canal, and feel cord-like structures, the swelling at times, will disappear. This is an emptying of a filled crypt, or possibly an anal duct or gland, brought to attention by Tucker and Helwig, and Hill in the *Transactions of the American Proctologic Society*.

We see many patients who receive considerable relief from this procedure. The finger is then passed along the anterior rectal wall, making a side-to-side movement. In the male the prostate is examined for size and texture. In the female the pelvic organs are felt for movability and size.

The rectal mucosa is examined for growths, or redundancy, submucous abscesses and swinging the finger towards the posterior rectal wall, the first valve may be felt. The coccyx and sacrum is then examined bimanually. Leading from either side of the sacrum, the pyriformis muscle may be examined. If the muscles are contracted, there is considerable pain elicited. Gentle massage of these muscles frequently relieves the patient of the so-called "low backache," or coccyxadynia. Frequently anal ulcer is found in cases of spasm of the pyriformis muscle, and healing of the ulcer brings relief.

Having examined the coccyx for old fracture, or dislocation, the finger is then brought down the posterior rectal wall, and into each sciatic notch. Anal ulcers and growths are felt as the finger comes down to the external sphincter. I have as yet been unable to make a positive diagnosis of internal hemorrhoids with a finger, except those thrombosed or fibrosed, but redundant rectal mucosa may be detected by instructing the patient to cough. This will force the rectal mucosa downward against the finger. This is also true for tumors.

It is surprising the amount of intra-abdominal pressure that is caused by a forceful cough. It is my opinion that this will aid as much as the position of squatting, or bending over a table in making a diagnosis of rectal tumors.

The finger is withdrawn slowly, making pressure against the anterior commissure. The tissue, and the finger cot are removed, placed into one of the paper towels and discarded.

Anoscopic.—I prefer a slotted anoscope, about 3.5 to 4 inches in length. The same procedure, as with the finger, is carried out. Coughing helps as much for this examination as for the digital. The patient is then instructed to lift a little more on the buttock, thereby relaxing the sphincter. The obturator is removed, and examination of the posterior commissure is made. The obturator is placed in the 'scope, and the instrument is rotated, so that the slot is on the right side.

This is continued on all four sides for ulcer, hemorrhoids, crypts, and tone and color of the mucosa, hypertrophied papilla, polyps. The anoscopic examination is completed, and the swabs and tissue are placed in paper towels and placed in receptacles beneath the table. The scope is then put in the basin for washing and sterilizing.

In examining for hemorrhoids, it is well to remember that the primary hemorrhoids on the right and left side are from the superior hemorrhoidal veins and pass into the submucosa about 3 to 3.5 inches from the external opening.

The primary hemorrhoid in the anterior commissure, is from anastomosis of the middle and inferior hemorrhoidal veins, and dips through into the submucosa at a lower level. Secondary hemorrhoids are from the middle and inferior hemorrhoidal veins. The plexus of veins so often seen at the anal opening are from branches of the middle and inferior vessels.

In removing primary hemorrhoids, it is well to place the sutures in the mucosa at different levels and thereby prevent a stricture of the rectum. Having completed the anoscopic examination, all materials are removed from the table.

A towel held by two small chains is then placed over the buttock, and the patient is then told to get on his knees on the table, placing the elbows on the pillow; a slight pat on the back will cause him to lower his back into the correct position.

He is told to raise his head. This seems to me to be more comfortable than the tipped position. The towel is then adjusted, giving exposure of only the anal opening. This has proven worth while, especially in hospitals where nurses previously had an aversion to a proctoscopic examination, particularly in male patients.

I always tell the patient there may be abdominal discomfort and a feeling of defecation, but assure him this will not happen.

Paper towels are then placed on the patient's legs, and below the feet, three or four 12-inch cotton applicators, some tissue and the proctoscope. Having lubricated the scope for a distance of about 2 inches, the tube is placed against the anus, the obturator end toward the symphysis. This is almost a vertical position. The 'scope is then pressed down, and the patient is instructed

to cough, thereby relaxing the sphincter, with a downward swing of the handle end, until the obturator end points toward the umbilicus; the 'scope enters the rectum up to a point 3 inches from the anus.

The obturator is removed, and the end of the tube is passed from right to left, front to back. The rectal ampulla, valves, color and tone of the mucosa are visualized.

The tube is then passed upward for 5 or 6 inches.

At a point about 7 inches from the anus, we reach the rectosigmoid junction. One must then follow the lumen of the bowel to the right, or left, as the position varies. Should there be a muscle spasm, air dilatation may be used to distend the bowel. If one proceeds slowly, this is not necessary.

The tube is then passed to a point 12 to 15 inches from the external opening. Assurance that all is going well, and an occasional pat on the small of the back, keeps the patient relaxed; making it easier for both the examiner, and the examined.

As the tube is slowly withdrawn, the rectal mucosa is examined for diverticula openings, neoplasm, nematodes, blood vessels, increased mucus or blood, and bleeding areas, ulcerations.

Should there be considerable fecal material, mucus or blood, a pledget of cotton may be placed beyond the end of the tube, and with the obturator, pushed into the lumen of the bowel.

Ulcerations or small openings not clearly visible, may be brought into view with the use of the microscope lens. Should there be neoplasm found, biopsy may be performed. The use of red or green cellophane between slides, as advocated by Felsen, may bring ulcers or blood vessels into better view. Red brings the vessels into view, and the green will show the edges of ulcers more clearly.

As the tube is withdrawn, each valve is examined on the upper and lower surfaces, especially at the base for neoplasm, or polypoid growth. It is in these areas that adenoma has been frequently missed.

The tube withdrawn to 3 inches, the obturator is placed, and the same direction followed as in entering. The tube is removed and placed in a paper towel. The used material is also placed in a paper towel. The area is cleansed with tissue, and all are placed in a receptacle.

The patient is then instructed to lie on the left side for a few moments before assuming the standing position. This will prevent fainting or dizziness.

I can think of nothing more fitting to close this paper than the following poetic lines:

Give to mine eyes — Give to mine hands
The power to see — That sense of touch
The source of hidden ills. — The throb of pain to still.

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MSMS FOUNDATION FOR POSTGRADUATE MEDICAL EDUCATION

Digest of Trust Agreement

Date of Trust.—The Trust Agreement between the Michigan State Medical Society and the Michigan National Bank, Trustee, was signed June 18, 1942.

Purposes.—The Michigan State Medical Society establishes an endowment fund to be known as the "Michigan State Medical Society Foundation for Postgraduate Medical Education," the net income to be expended (a) to provide postgraduate instruction relating to the science of medicine and surgery; (b) to conduct clinics and courses of instruction for doctors of medicine resident in Michigan; and (c) to be used for such other purposes of a medical educational nature as may be determined by the Michigan State Medical Society.

Initial Gift.—The State Society deposits with the Trustee the sum of $10,000 in cash and bonds, to create the MSMS Foundation, as first contribution to the principal of said Trust, the net income therefrom to be used for the purposes set forth above. This money and all additionall funds shall be kept in trust by the Michigan National Bank, Trustee.

Gifts from Others.—Other donors may add to the principal of this Trust by gifts, by will or otherwise; any such donations having a fair market value of not less than $5,000 may be given a special name by the donor, and the net income thereof shall be used as directed by said donor.

Powers of Trustees.—The powers of the Trustee to hold, manage, control and care for all funds and property are specifically outlined in the Trust Agreement, provided that no sales or purchases of investments shall be made without the written approval of the Michigan State Medical Society's Trust Committee (composed of the Chairman of The Council, the Chairman of the Finance Committee, and the Treasurer of the Society).

The disbursement of income shall be made as directed by the Michigan State Medical Society, upon orders signed by the Trust Committee. The Trustee shall keep a true account of all the affairs in the Trust and render a report to the MSMS December 15 annually.

Successor Trustee.—The Trustee has the right to resign, upon due written notice, whereupon the Society shall select a successor Trustee within a 60-day period. The Society shall have the right to change the Trustee at any time, upon due written notice.

Continuance of Trust.—The instrument of Trust and all provisions thereof shall continue until terminated. In the event the Trust is terminated, all such assets shall be used and applied by the Michigan State Medical Society for the purposes hereinabove set forth.

Donations and Gifts.—All donations and gifts to the Foundation shall be made to and in the name of the Michigan National Bank, a corporation, Trustee of the MSMS Foundation for Postgraduate Medical Education.

Cooperation and Direction, or Obstruction



President's Page

LAY organizations and agencies frequently plan and promote various activities having to do with medical matters. This fact may indicate that there are medical needs which the profession has overlooked or has neglected. Frequently, these activities become accomplished facts before the medical profession is consulted.

Too often in the past physicians have refused to cooperate with lay agencies and have frequently attempted to obstruct their activities. This reaction is a perfectly normal one. However, coöperation and active direction by the medical profession have accomplished much good; from the standpoint of public relations they are most valuable.

Alert medical leaders should constantly be watching and studying the public trends in relation to medical services. They should have plans to meet these medical needs before they are demanded by the public and before lay agencies have inaugurated them. However, when a lay plan for medical service which has merit is presented, the profession should coöperate and assume the direction of this medical activity. Attempts to obstruct such plans react badly upon the medical profession.



President, Michigan State Medical Society

EDITORIAL

HOME SERVICE

■ The Army and Navy have taken to themselves most of our active working doctors. That is not a job for the halt, the tired, the older man who is using all his energy in his daily run of life. But this very fact puts an added burden upon those left behind. The world has just passed through a great depression. A new order is developing. Many sociological problems have been met. Contacts of doctors with various government relief agencies have not always been satisfactory. During the past few years, however, by constant effort, by conference, by agitation, by every means at hand those problems have been gradually brought to a more economically sound solution.

A few of the doctors in each community have always had to shoulder the burdens of leadership and work out these problems as they have arisen. The doctor willing to work the hardest is usually the one who must solve these problems. The one with a large income, who has no personal economic worries, is often not interested: "Oh, yes. That should be done, but you know I haven't time for such detail!" The other fellow must have time for "such detail" if he is to eat.

But times have changed. Both the struggling young doctor building a practice and many of the older ones willing to work have gone to war. The infirm and the aging have all been left behind, together with many younger and more active doctors, who have been declared essential, and who are doing triple duty. If the sociological advances and the economic arrangements of the past few years are to continue, those left at home will have to do the work. They may see no present urge when too busy for their own health, but signs are developing of an effort to "slip" the medical profession back a notch, placing over it more controls and restrictions and demanding more, gratis.

With the new Legislature and Congress in session constant contacts with Legislators and Congressmen will be necessary in order to keep us acquainted with legislation in which we are interested, and to make available to them our best judgment in problems of health, medical education, and myriads of other matters for which they turn to us for advice.

Members of the profession who have gone to war will one day return with a duty well done. Return to what? Will those on the home front have done their duty as well? There are many small and large jobs to do, and now the men who dislike to take puttering jobs must do so. Medical societies must function if the profession is to grow in service and prestige. Those at home must now be the officers and committee members and must do the work. To be asked to assume some of the responsibilities of guiding medical affairs is a compliment and should be willingly accepted by all. Willing workers are needed more than ever before.

No member of the profession should place himself or his wishes above the call for service. Some are already carrying more than their fair share of the burden. If all were willing no one would be overly driven, the necessary things would be done, and all would be right with the medical world.

DOCTORS "FROZEN"

■ At Christmas time the news services carried an account of the freezing of doctors in Michigan. Paul R. Urmston, M.D., Michigan Consultant to the War Manpower Commission, announced that no more doctors would be taken into the armed forces for the balance of 1942 and the first part of 1943. Early in the past year a quota had been set up for all the states, based upon population, number of doctors and probabilities of availability for military service, and needs of civil and industrial practice. Michigan had passed this number with 134 per cent, not counting the interns and house physicians called to the services.

It was announced that except for those whose commissions were in process, no others would be called. A survey was started at the same time to determine what the civilian and industrial needs of the state would be. Each county was asked to report, and a tabulation of the reports received show only a few critical areas in the state. These

are areas that had very few doctors before the development of new war industries, and have now become critical as a result of the war effort. Some have lost their doctors by recruiting service "draining the state dry" of doctors. Approximately fifty to seventy-five doctors for all of Michigan would supply the needs thus established. There is no legal way as yet to relocate doctors, thus taking them out of over-supplied places and into areas of shortage. However, it is hoped that doctors who could be so used will volunteer. There are without doubt a few in our larger cities who are not satisfied with their present situation, and would be willing to move if shown a suitable place with good prospects.

Promise has been made that new quotas for 1943 will be made and may be announced from month to month, but will be built up with an eye to the record of the state in the past year, thus reducing the quotas of the states whose doctors have liberally responded. This was taken into consideration when Dr. Urmston made his reassuring announcement, which received considerable favorable editorial comment from our metropolitan press.

The Medical Recruiting Board functioned probably too well in Michigan judging by the result. Procurement and Assignment has worked under tremendous difficulties, lack of adequate or even essential help at times, and at others at cross purposes with the recruiting service which came in and used methods strangely suggestive of pressure. That must not occur again. When the new quotas are set up we must fill them. In this state there are still a few doctors of draft age who have not received commissions. Some of these were rejected for physical or other very good reasons, but some have not yet applied for commissions.

The soldiers and sailors who are fighting this global war are entitled to the very best medical services the profession can give, and that by doctors young or active enough to serve. The next call for medical officers will be a difficult one to fill because of the fact that there are so few men left who are suitable for military life. Those few together with the next age group will be invited to apply for commissions.

In the meantime the so-called "freezing" of the doctors was a good psychological move. It has reassured the public that their medical requirements will be met as well as it is possible. To increase this sense of well-being and protection, the doctors must coöperate and insure that services will be obtainable. Criticism has developed in some parts of the state over a different situation. A few doctors have been accused of making themselves hard to find. They will not answer calls during the night, but insist that all calls go to the hospital where one man will be on duty, and the next morning the patient will be returned to his regular doctor.* Another criticism is that some doctors are having their office receptionists tell people who call that the doctor will be unable to give them an appointment in less than ten days or two weeks. "If it is an emergency, go to some other doctor." Doctors so criticized are busy, but so are the others. Some way must be found to take care of these people. They must not be put off or allowed to suffer. But they should call during regular hours when possible.

The proposal has been made that doctors be recruited into the United States Public Health Service and assigned to areas where the people are not getting the attention they should have. The quickest way to bring about that situation would be to make it too difficult for the civilian population to find available doctors. We believe this is a rare condition involving only a few of our doctors, and that they are probably justified in their methods.

Considering the tremendous work being done by the great plurality of doctors at home who are serving by working three times as hard as ever before, they should have only the greatest praise instead of calling their attention to more service, which is done only because of demonstrated necessity. We are proud of the record.

*This plan is being carried out in several cities by the County Medical Societies in an effort to conserve the doctor's rest time.

NERVOUS AND MENTAL CONDITIONS AMONG SELECTEES

■ The following statement is submitted by the Committees on Mental Hygiene. Raymond W. Waggoner, M.D., Chairman:

In these days of stress, certain groups are apt to be requested to do more toward the war effort with less compensation than others who appear to profit from the emergency. Physicians as a group are always expected to perform "above and beyond the line of duty" and the present war situation is no exception. The al-

ready over-worked physician is requested to give freely of his time to the local draft board for the examination of selective service registrants. Sometimes, even though he finds a condition present which according to regulations automatically and permanently should place the registrant in Class 4-F, the local board will overrule the physician's recommendation and send the registrant to the Army Induction Board for induction. This experience is a definite mental trauma to the registrant; particularly is this true if the registrant had not previously known of his defects or if the defect happens to be mental. In addition to the harm done the registrant, there is the additional expense of transportation and of the Induction Board examination. Further, if by some chance the man should happen to get through the Induction Station examination, and this is not unlikely in certain types of mental defects, then the Government is shouldered with a serious responsibility which might have been averted had the registrant been correctly handled at the time of his local board examination.

The psychiatric problem is a particularly important one since many potential soldiers who have mild or serious psychiatric defects, making them incapable of adjusting in military service, still appear outwardly normal. Oftentimes because the physical appearance is good, the local board may consider that such a person should go into Army Service. These may be the very ones who are harmed most by the experiences at the Induction Station. Such a man may be very anxious to get into the Army and yet once in serves as a focus of discontent and maladaptation. The physician at the local board can do much to prevent such unfortunate experiences by the careful study of the situation at the time of the original examination. If the case is borderline, then the examining physician should make adequate notes on the proper form concerning the conditions found. *It is very important* that this information be available to the examiners at the Induction Station. In any case where the local board does not cooperate, a report should be made to the Mental Hygiene Committee of the State Medical Society or to the Selective Service Headquarters in Lansing. It should be noted that men rejected by Selective Service and at the Induction Stations may have arrangements made in the near future for referral to the local physician for treatment.

Such careful study would be almost impossible in most of the selective service examinations, which are necessarily conducted in haste. That information is necessary and should be at hand. Provisions have been made for family doctors having personal knowledge of selectees to give that information in writing to the examining physician. If doctors having patients who are mentally so neurologically unstable and are subject to the draft, would make that information available, a real service would be rendered, and probably many psychiatric episodes would be forestalled. In order to accomplish anything at the selective service examinations more than a mere screening must be done. A complete examination as at first is the only answer. A well-known psychiatrist was invited to contribute on this subject, and his editorials immediately follow.

OUR EIGHTEEN-YEAR-OLDS

■ Every physician knows he can expect to see some venereal disease in patients who are eighteen, or even younger, but the predominant incidence of venereal disease is not in that age group. Boys at eighteen are usually a fairly clean group; they are sophisticated (and the word is used as Webster intended), it is true, they are adventurous and should be, and they are going to become soldiers, sailors and marines, and they want it so. They are going to fight battles for our country, for you and for me. For your daughter, and your daughter and your daughter, who is still only eighteen or younger, or perhaps your granddaughter. When they come back to civilian life, those eighteen-year-olds will be the husbands of your daughter, and your daughter, and your daughter, or, perhaps, your granddaughter, and you do want them to be all you expect so far as health is concerned, don't you?

Then keep this thought in mind. If you fail to report and isolate a single case of gonorrhea or syphilis, you are guilty of a ruined life somewhere in the future and, who knows, it might be your daughter, or your daughter, or your daughter, or perhaps, your granddaughter; and it could be your son. (Contributed).

THIRTY THOUSAND DOLLAR MISTAKES

■ How long and how often could such expensive errors be made without ultimate bankruptcy? Yet according to information already published, those thirty thousand dollar errors are occurring at the rate of between two and four hundred times a week, and have been doing so for more than a year. Suppose we take the premise that such was the case for the year just past—1942, and suppose we split the difference between two hundred and four hundred, and use three hundred per week. The total number of errors was 15,600; and the cost at $30,000 per error would be 468 million dollars. It sounds fabulous, doesn't

it?—yet that is what the year 1942 will cost this country during the next twenty years for the misfits from psychiatric conditions who were taken into military service. And keep in mind that is just for one year, and the figures used are on the conservative side.

Perhaps the opinion will be mentioned that even though 15,600 cases were found and eventually discharged from military service, certainly no one would be so gullible as to think and state that such cases are due to military service, and that your government will compensate such cases because they occurred "in line of duty." Yes, your government will do that very thing, for with World War I as a standard, it will not take much imagination to see that Congress will statutorily state the etiology of most mental diseases with a definiteness that can't be disputed by any psychiatrist.

The medical profession should be concerned about this situation and do its ultimate for national defense in preventing as many as possible of these mistakes. But how? Well, in any case where there is a shadow of doubt, the local draft board should defer the case until properly investigated by a social agency. If the doubt arises at the induction board, the case should again be deferred until investigated by a social agency. It would seem that with a little attention, many thousands of capable young women could be taught to make an investigation from a well-formulated plan that would be particularly relevant to the military service; for since we have had armies and wars throughout all the eras known to man, doubtless there can be formulated a fair model of what an efficient soldier should be, and that formula could be used on all doubtful cases. Many cases that are now called "in line of duty" will then be found to exist now "prior to enlistment" and entrance to military service will be precluded.

If a single social agency should exclude only one in the year 1943, it would be a sound investment, and if we had them with every draft board, and induction board, that three hundred a week could be reduced almost entirely. (Contributed)

WAR DOCTORS

■ Announcement of military postgraduate courses starting immediately has been made in ten medical schools, including the University of Michigan. Doctors who go into military service are very largely being sent to postgraduate studies for a few weeks. Admiral McIntire told the Conference of State Society Secretaries and Editors that his men would be sent back to civilian practice after the war much better men than when they left for the war.

This promise seems to be on the way of fulfillment. The University Medical School will be devoted to war training for the next six months, having about two hundred physicians there at a time, and many are going to Washington for training in tropical and oriental diseases. This is as it should be.

Doctors of Medicine who are privileged to be war doctors will come back to us grown in stature, as so many did after the last war. In that other war there were schools established for instruction, but in no way comparable to what is now being done. These men so well trained will of necessity become better doctors, and they will literally have had a world of experience. The best sort of instruction is by doing, and they will see and do many things. War has always opened up new fields in medical knowledge, and this one already is developing new techniques. We are inclined to offer congratulations to our war members because of the opportunities that are at their door.

MILITARY MEMBERS CHANGING ADDRESSES

Except as hereinafter provided no parcels shall be accepted for dispatch to A.P.O.'s outside U. S. unless they contain such articles only as are being sent at the specific written request of the addressee. Individual copies of newspapers or magazines shall be accepted for dispatch to A.P.O. outside the U. S. only where subscriptions are specifically requested in writing by the addressee or for which subscriptions are now in effect. Such copies to individuals shall be accepted only from publishers who shall place on the wrapper, or on the publication when a wrapper is not used, a certificate (which shall be regarded as sufficient to authorize their acceptance) reading as follows: "Mailed in conformity with P.O.D. order No. 19687.—*Postal regulations regarding export of journals.*

■ The Journal wishes to send all its issues to our members in military service, but their addresses are constantly changing. When a member goes into the service, his next Journal is mailed to his old address; shortly a notice comes back from the Postmaster: "Dr. X is not at such address—his present address is——," or no new address is given. That copy of The Journal is lost. The address is changed in our records and on the addressograph machine, and

the next issue of THE JOURNAL goes to the new address. Frequently we receive another card from the Postmaster, which may or may not give us a new address; but another number of THE JOURNAL is wasted. We have had as many as eight such changes for a single man. It takes most of one clerk's time to try to keep our mailing list up to date.

If members who go into military service would send a card to the publication office (2020 Olds Tower, Lansing) giving exact information where to send THE JOURNAL, it would greatly simplify matters as well as assure delivery of THE JOURNAL. If the military address is not permanent or approximately so we would suggest that a *permanent home address* be furnished: i.e., wife, father, bank, Trust Company, from whence THE JOURNAL may be forwarded to the final address. If our members will coöperate and keep us informed we will do our part. When the permanent home address is not supplied, we shall necessarily have to stop mailing THE JOURNAL, to stop needless waste of vital paper stock.

THE JOURNAL is being submitted to Military Censor before each mailing to make it eligible for delivery to our overseas members. As soon as members are given an A.P.O., number address, we request them to notify the publication office at once, to help insure receipt of the State Society publication.

CONTINUE SOCIETY ACTIVITIES

The need for constant activity of our medical societies and committees has been mentioned editorially, but cannot be too strongly stressed. This has been emphasized by the County Societies Committee of the Council in their annual report to the Council from which we quote:

Postgraduate Medical Education Programs for County Societies.—This was discussed, and it was recommended to the county societies that every effort be made by them to maintain staff and county society meetings; where it is impossible or not feasible to bring in outside speakers, the local members should present subjects. More use should be made of the MSMS Speakers' Bureau, it was felt by this Committee.

The County Societies Committee also recommends that the Postgraduate Conferences in those cities where they are held at present be scheduled to coincide with county society meetings in order to bring the greatest number to the postgraduate sessions. It was also felt that the special postgraduate programs for the Upper Peninsula should be continued, if at all possible.

Many societies have attempted to consolidate staff meetings and their society meetings, with marked increase of enthusiasm and attendance. With continued effort much good can be thus accomplished, and medical organization benefited.

RETURN TO WHAT?

■ What will the postwar medical world be? Signs already point the way.

Closest to home but lost in the temporary rush of medical practice is the question of medical relief. For ten years we have struggled to take medical relief out of bureaucratic hands and give it some sympathetic direction by medical minds. With the relief rolls much smaller and all able-bodied persons working, medical relief demands have reached an all-time low. The doctor takes them in his busy stride and forgets to note that he was called by the social worker and not by the patient; the social worker largely determines the services! Is this not the time to correct some bad abuses and precedents established by medical default?

Second sign: The right to practice medicine must be definitely clarified. Standards of preparation and education must be maintained, if not improved. As a war measure and to make more doctors of Medicine available, it is urged that licensure requirements be suspended; this might be a boomerang after the war.

Third sign: Plans to place more central control over medical practice, including compulsory health insurance with its ramifications of controlled doctors are apparent.

A bright side, however, will be presented in the postwar era. We have in the last generations solved the problems of Typhoid Fever, Diphtheria, Smallpox, and Malaria. Tuberculosis is on its way out. Acute Infections are being eliminated. Chemotherapy is only beginning. Pneumonia and the common cold will respond to further research. A generation ago the young doctors were told their practice of medicine would soon be preventive. We can still tell them that, but we know it will continue to be largely curative.

Curative Medicine has changed in its Armamentarium, in its scope of disease conditions as well as its preventive principles.

After this war period the public will have become much more conscious of its doctors of medicine. People have had to consider the doctor's health and recreational life as never before. Opportunities of leadership and counsel will in-

crease. More of our superlatively trained men should seek public life as legislators, lawmakers, and as administrators of government.

The postwar medical world will be a different one, but closely allied to the prewar world. Advances have always followed periods of stress. And it is our task to guide those advances into the channels most helpful to us and to our people, the patients whom we serve. The keenest observation and thought of our members must be given these problems to assure the correct answers. There is opportunity for all. If all will give their best efforts, the future is bright.

But to ensure such a future, medical societies, academies and economic groups must be active—far more than today. The scientific work must go on to reach the goal ahead. Economic studies and efforts were never more important. The tendency of doctors of medicine to forget the experience of only a few years ago in the presence of present strenuous times is not good. Lessons learned in sweat should be remembered. Success and happiness require constant effort.

PERCY JONES HOSPITAL

■ Percy Jones General Hospital is pictured on our cover this month. It has been repeatedly stated that the Army bought the Battle Creek Sanitarium. This is not true. The Sanitarium sold one block of buildings and is still operating in several of its remaining buildings across the street.

This view is from the rear across beautiful Irving park, a restful spot of Battle Creek. On the opposite side of the park is new Community Hospital and just across another street at the northern end is Leila Hospital.

COUNCILOR L. J. JOHNSON

■ Lieutenant Commander L. J. Johnson of Ann Arbor reported for duty with the Navy, January 16, 1943. He resigned as Councilor, having served meritoriously since his election to fill the vacancy created by the election of Howard H. Cummings to the position of President-elect in September, 1941.

Dr. Johnson has, during his year of service, endeared himself to his fellow members of the Council, and they regret his departure, even though they congratulate him on his new undertakings. We wish him Godspeed.

Colonel Henry R. Carstens, now at Camp McCoy, was the first official of the State Medical Society to answer the call, being president of the society at the time.

The first Councilor to go into service was Major Holmes, who went first to Camp Hulan, Texas, and is now at Washington, D. C., studying oriental and tropical diseases for two months, January and February. Lt. Commander Johnson is the second Councilor.

COUNCILOR DEAN MYERS

■ President Cummings has appointed, and the Council confirmed, Dr. Dean Myers of Ann Arbor to fill the vacancy on the Council caused



Dean Myers, M.D.

by the military service of Lt. Commander Johnson. Dr. Myers is a man of much experience, having at one time been Professor of Ophthalmology of the University of Michigan, Homeopathic Department. His willingness to work for medical advancement, and his pleasant and friendly understanding bespeak for him a successful service on the Council.

WAR BONDS

■ Again we urge everybody to buy more war bonds. If this war is to be successfully prosecuted more and more credit will be needed. It is now estimated that it takes seven tons of shipping to send abroad and maintain one soldier. The President announced a million and a half already over seas. Think what that means, and then take a pencil and see how much more than ten per cent of your income can be put to work to get our boys back home. This time we want them back permanently. That will take some doing, and we at home can do our part by furnishing the wherewithal. Buy, and buy, and buy bonds.

OFFICERS

■ Other newly elected officers, selected at the midwinter meeting of the Council in Detroit, January 16 and 17, 1943, are F. Fernald Foster, reëlected Secretary. His long tenure of that office has been marked by the most unstinted service, reaching to practically every county in the state nearly every year. His travels have been extensive and time-consuming. He knows the profession of the state as does no one else. He is eminently fitted for the position, and will continue to serve in his efficient manner.

Dr. Wm. A. Hyland of Grand Rapids has held the position of Treasurer for many years, and has filled it to complete satisfaction. His personal associations and affiliations, and his financial bent make him ideal for this office, and we are happy that he will continue in it.

Dr. Wilfrid Haughey of Battle Creek is the new editor. He has been acting editor since the editor, Major Holmes, entered the Army service. Dr. Haughey has had previous editorial experience, the MICHIGAN JOURNAL in 1909 to 1913 and the Phi Beta Pi Medical Fraternity *Skull and Pelvis* for several years.

Dr. Otto Stryker was appointed by President Cummings to the Councilor position held by Major Holmes following his resignation upon entering service, and confirmed by the Council. Councilor Stryker is not new to Councilor duties, having served as Speaker of the House and ex officio member of the Council.



L. FERNALD FOSTER, M.D.
Bay City
Secretary



WM. A. HYLAND, M.D.
Grand Rapids
Treasurer



WILFRID HAUGHEY, M.D.
Battle Creek
Editor and Councilor Third District



O. L. STRYKER, M.D.
Freeport
Councilor Eleventh District

DO NOT FORGET YOUR POSTGRADUATE PROGRAM for 1943*

Intramural Courses

Allergy
Anatomy†
Diseases of Blood and Blood-forming Organs
Diseases of Genito-urinary Tract
Diseases of the Heart
Electrocardiographic Diagnosis
Gastroenterology
Gynecology and Obstetrics
Internal Medicine (Summer Session Course)
Laboratory Technique
Neurology and Psychiatry
Nutritional and Endocrine Problems
Ophthalmology and Otolaryngology
Pathology
Pediatrics
Proctology
Roentgenology

Extramural Courses Centers

Ann Arbor
Bay City
Cadillac
Flint
Grand Rapids
Kalamazoo
Jackson
Mt. Clemens
Sault Ste. Marie, Marquette, Houghton, Ironwood, Powers

*The Committee on Postgraduate Medicine feels that the needs of our profession due to the emergency require even an expansion of postgraduate opportunities. At the same time all must realize that shortage of teaching personnel may require a sharp curtailment. Ample notice will be given either through THE JOURNAL or by personal communication should omissions or changes become necessary.

†The course in Anatomy will be given on Wednesdays throughout the second semester, beginning February 3, at 1:00 P.M., at the University of Michigan.

ANNUAL MEETING OF THE COUNCIL, MSMS
January 16 and 17, 1943

HIGHLIGHTS OF THE MEETING

- Membership of State Society at an all-time high (4,714).
- Fifteen hundred Michigan Doctors of Medicine serving in the armed forces.
- "Industrial Medical and Surgical Clinic," April 8 in Detroit, approved.
- Study of postwar postgraduate programs and special refresher courses recommended.
- Integration of all medical postgraduate programs in Michigan recommended.
- Proposed amendment to Michigan Medical Practice Act, to permit licensing of graduates of wartime telescoped medical courses, approved.
- Auditors' Report for 1942, and Budgets for 1943 approved.
- Medical examinations prior to "hardening" program for high school students studied and approved.
- Wayne County Medical Society resolution re seekers after public office who favor federalized medicine adopted.
- Progress Report on Michigan Medical Service presented.
- Dean W. Myers, M.D., Ann Arbor, chosen as new Councilor of 14th District.
- Secretary, Treasurer, and Editor elected.

—FIRST MEETING—

January 16, 1943—10:10 A. M.

1. *Roll Call.*—The meeting was called to order by A. S. Brunk, M.D., Chairman, on Saturday, January 16, at 10:10 a.m. in the Statler Hotel, Detroit. Those present were Councilors Brunk, Umphrey, Riley, Haughey, Hubbell, Moore, Morrish, DeGurse, Barstow, Perkins, Stryker, Miller, Huron and Beck; Speaker Ledwidge, President Cummings, President-elect Keyport, Secretary Foster, Treasurer Hyland, Past President Corbus, and Executive Secretary Burns.

Absent: E. F. Sladek, M.D., and L. J. Johnson, M.D. (in Navy).

2. *Minutes.*—The minutes of the meeting of The Council held September 24, 1942 and of the Executive Committee meetings of October 21, November 18, and December 17, were approved on motion of Drs. Stryker-Umphrey. Carried unanimously.

3. *Secretary's Annual Report.*—The annual report of the Secretary was presented by L. Fernald Foster, M.D. and *referred to the County Societies Committee.*

SECRETARY'S ANNUAL REPORT—1942

I herewith submit the report of the Secretary for 1942—the first World War II yearly report.

Membership

Despite the fact that the forecast of one year ago stressed the possibility of a decided decrease in paid memberships, the Society's member roster for 1942 showed that another all-high was recorded. Many members entering the military services paid their 1942 dues, hence the real impact of the war will not be felt until 1943.

In 1942 there was a total of 4,714 members, including 59 emeritus, honorary and retired members, and 210 military members. The total paid memberships were 4,445 with net dues of $46,184.54 accruing to the Society. The number of members with unpaid dues for 1942 was 85. The membership tabulation for the years 1941 and 1942 showing net gains and losses, unpaid dues and deaths is as follows:

1941	*1942*	*Gain*	*Unpaid*	*Deaths*
4,495	4,655	160	85	52

MEMBERSHIP RECORD 1942

	1941	*1942*	*Military*	*Loss*	*Gain*	*Unpaid*	*Deaths*
Allegan	23	24	1	—	1	—	1
Alpena-Alcona-Presque Isle	20	20	1	—	—	—	1
Barry	14	13	—	1	—	—	—
Bay	81	70	5	11	—	1	1
Berrien	61	55	5	6	—	3	—
Branch	20	21	3	—	1	—	1
Calhoun	109	99	16	10	—	—	2
Cass	12	14	—	—	2	—	—
Chippewa-Mackinac	18	21	—	—	3	—	—
Clinton	12	12	—	—	—	2	—
Delta-Schoolcraft	27	24	—	3	—	1	—
Dickinson-Iron	22	19	2	3	—	—	—
Eaton	29	29	—	—	—	—	1
Genesee	183	188	1	—	5	2	2
Gogebic	25	23	—	2	—	—	3
Grand Traverse-Leelanau-Benzie	41	41	2	—	—	1	1
Gratiot-Isabella-Clare	40	40	—	—	—	—	1
Hillsdale	25	24	2	1	—	—	1
Houghton-Baraga-Keweenaw	40	36	3	4	—	—	1
Huron	12	11	—	1	—	—	—
Ingham	154	153	3	1	—	—	—
Ionia-Montcalm	40	42	—	—	2	—	1
Jackson	94	92	2	2	—	—	—
Kalamazoo	118	118	8	—	—	1	1
Kent	243	239	14	4	—	11	3
Lapeer	14	15	—	—	1	—	2
Lenawee	45	39	4	6	—	4	—
Livingston	19	16	—	3	—	—	—
Luce	11	11	2	—	—	—	—
Macomb	42	39	1	3	—	3	—
Manistee	14	13	1	1	—	—	—
Marquette-Alger	42	36	2	6	—	3	—
Mason	8	13	—	—	5	—	—
Mecosta-Osceola-Lake	15	15	1	—	—	1	1
Medical Society of North Central Counties	23	19	1	4	—	—	—
Menominee	13	13	1	—	—	—	—
Midland	16	16	—	—	—	1	—
Monroe	38	39	1	—	1	1	1
Muskegon	79	81	1	—	2	—	—
Newaygo	12	10	1	2	—	1	—
Northern Michigan	28	31	1	—	3	2	—
Oakland	151	148	8	3	—	4	2
Oceana	11	12	—	—	1	—	—
Ontonagon	8	7	1	1	—	—	1
Ottawa	35	32	1	3	—	3	1
Saginaw	98	96	7	2	—	2	3
Sanilac	13	15	—	—	2	1	—
Shiawassee	29	29	—	—	—	—	—
St. Clair	54	54	—	—	—	—	—
St. Joseph	25	22	3	3	—	—	1
Tuscola	25	25	3	—	—	—	—
Van Buren	28	25	2	3	—	1	—
Washtenaw	181	179	15	2	—	6	1
Wayne	1933	1945	81	—	12	29	19
Wexford	22	22	4	—	—	—	—
Military Members	—	210	—	—	210	—	—
	4,495	4,655	210	91	251	85	52
		4,495			91		
		160			160		

Paid Members	4,445
Military Members	210
Emeritus & Honorary Members	59
Total	4,714

Deaths During 1942

We regretfully record the deaths of the following fifty-three members during 1942:

Allegan County—E. D. Osmun, M.D., Allegan.
Alpena County—A. R. Miller, M.D., Harrisville.
Bay County—John W. Dickinson, M.D., Oscoda.
Branch County—H. A. Schneider, M.D., Coldwater.
Calhoun County—C. G. Fahndrich, M.D., Battle Creek; Claude E. Hale, M.D., Marshall.
Eaton County—A. G. Sheets, M.D., Eaton Rapids.
Genesee County—B. E. Burnell, M.D., Flint; E. D. Rice, M.D., Flint.
Gogebic County—W. C. Conley, M.D., Ironwood; Theodore S. Crosby, M.D., Ironwood; John Reid, M.D., Ironwood.
Grand Traverse-Leelanau-Benzie—George A. Holliday, M.D., Traverse City.
Gratiot-Isabella-Clare County—Fred J. Graham, M.D., Alma.
Hillsdale County—J. L. Yeagley, M.D., Waldron.
Houghton County—C. H. Rupprecht, M.D., Calumet.
Ionia-Montcalm County—Herbert M. Maynard, M.D., Ionia.
Kalamazoo Academy of Medicine—Richard F. Weirich, M.D., Marcellus.
Kent County—C. DeJong, M.D., Grand Rapids; Albertus Nyland, M.D., Grand Rapids; G. W. Webster, M.D., Grand Rapids.
Lapeer County—Fred R. Hanna, M.D., Lapeer; Howard K. Shrom, M.D., Imlay City.
Mecosta-Osceola-Lake—Glenn Grieve, M.D., Big Rapids.
Monroe County—E. M. Cooper, M.D., Rockwood.
Oakland County—Stuart Terry, M.D., Pontiac; H. W. Williams, M.D., Pontiac.
Ontonagon County—Frank W. McHugh, M.D., Ontonagon.
Ottawa County—W. M. Tappan, M.D., Holland.
Saginaw County—Frederick W. Freeman, M.D., Saginaw; N. F. McClinton, M.D., Saginaw; Keith M. Morris, M.D., Saginaw.
St. Joseph County—J. H. O'Dell, M.D., Three Rivers.
Washtenaw County—Reuben Peterson, M.D., Duxbury, Mass.
Wayne County—Leopold Adler, M.D., Detroit; Norman M. Allen, M.D., Detroit; Oscar S. Armstrong, M.D., Detroit; W. L. Babcock, M.D., Detroit; Fred N. Blanchard, M.D., Detroit; Don M. Campbell, M.D., Detroit; Angus L. Cowan, M.D., Detroit; Arnold T. Droste, M.D., Dearborn; Harry S. Gorelick, M.D., Detroit; David J. Levy, M.D., Detroit; Frank J. MacDonell, M.D., Detroit; Carl C. McClelland, M.D., Detroit; Nelson McLaughlin, M.D., Detroit; Stanley G. Miner, M.D., Detroit; Edward G. Minor, M.D., Detroit; Irwin H. Neff, M.D., Detroit; R. T. Tapert, M.D., Detroit; Jean A. Vernier, M.D., Detroit.

Financial Status

On December 26, 1942, the close of the fiscal year, the books of the Society were audited by Ernst & Ernst.

Review of their published report revealed the following financial condition of the Society. Assets are listed at $66,076.94 and are $10,974.36 higher than a year ago. The net worth is $40,153.21, showing a decrease of $8,618.67, due chiefly to the transfer of $10,000.00 of Society funds to the Foundation for Postgraduate Medical Education.

The income from dues was $52,738.00 of which $6,587.97 was allocated to the JOURNAL. This allocation produced a JOURNAL profit of $1,703.93. Interest was received in the amount of $1,068.28, an increase of $70.98 over last year. Miscellaneous income of $62.12 gave a total income of $48,984.36. This is a decrease of $1,546.77 from a year ago.

The Society expenses totaled $36,301.97, a decrease of $2,775.39 from last year. Other expenses are listed as $1,591.00, a loss from sale of securities and a provision for deferment of dues paid by military members of $11,700.00, making a total of $13,291.00. This amount subtracted from the net income of $12,682.39 leaves a deficit of $608.61 on the operation of the Society for the year.

Securities—The security portfolio consists of high grade bonds, approximately 50% of which are in United States Savings and Defense bonds. No change in the list has been made except for the sale of Associated Gas and Electric Corporation bonds. The quoted market price of the securities on December 20, 1941 was $30,674.06 as compared with $22,452.00 as of December 26, 1942. The difference is due chiefly to the transfer of bonds, having a market value of $9,359.00, to the Postgraduate Medical Education Foundation.

Medical Defense Funds—The audit of the Medical Defense Fund as operated by Dr. William A. Hyland, trustee, was made by our auditors. A balance on hand December 21, 1941 was $4,458.32. Interest in the amount of $325.00 and profit from sale of securities of $39.50, and the increased value of securities of $45.00, makes a total of $4,867.82. Expenses consisted entirely of legal fees and amounted to $1,319.15, leaving a trust balance on December 26, 1942 of $3,548.67; a shrinkage of $909.65 in the net value of the fund resulted.

The Journal.—THE JOURNAL had allocated to it $6,587.97 from members' dues. Other income was from subscriptions, advanced reprint sales, advertising sales and JOURNAL cuts, making a total income of $20,518.08. The expenses included the editor's salary and expense, amounting to $2,250.00, printing and mailing of THE JOURNAL, $12,229.95, and these with other relatively small expenses, made a total of $18,814.15. This was $414.15 over the budget estimate. Without the allocation to THE JOURNAL from members' dues there would have resulted a loss of $4,884.04 in the operation of THE JOURNAL for this year.

Further comment regarding military members' dues —to quote Ernst & Ernst (page 7), "The Society has adopted the policy of waiving payment of dues of members in the armed forces of the United States, and in the event the current year's dues were paid, to allow one year's membership without charge at the expiration of military service. A provision of $9,900.00 has been made to defer the income received from those members known to be in service who have paid dues for the year in which they entered service. This amount has been based upon reports from county societies. An additional provision of $2,400.00 has been made for deferment of dues of members in military service who have not been reported to the Society as being in service."

The budget at the beginning of the year set up a reserve of $600.00 to cover this matter. Further study deemed it wise to set up under unearned income an item called "dues for military members applicable to a future year" in the amount of $9,900.00. An additional reserve of $2,400.00 was set up "for deferment of dues paid by military members not reported." This minus the $600 already set up makes a total of $11,700.00 to be set up as a reserve for military members' dues the year following their return to civil life. This does not take into account the yearly loss of income from these members while they are in service. The latter is to be considered in each yearly budget prior to the termination of the war.

Summary.—The assets increased by $10,974.36 while the income increased by $1,546.77. The expenses were reduced by $2,775.39. The excess of income over expenses was $1,228.62, but a net loss of $608.61 was sustained after deducting $11,700.00 reserves for military members and loss of $1,591.00 from sale of securities, making a total of $13,291.00. The actual expenses were $7,498.03 under the budget estimate.

The 1942 Annual Meeting

The Annual Meeting was held in Grand Rapids in September, 1942. Despite the War, a total registration of 1,746 was recorded. The 1942 attendance was very gratifying, surpassing our fondest expectations. At the time of the meeting hundreds of members were serving with the armed forces and those remaining at home were in the throes of practice readjustments.

The General Assembly type of Scientific program

was continued and with it the Discussion Conferences which were introduced at the 1941 meeting, and which met with much popular approval.

A modest scientific exhibit, consistent with available facilities, was presented in Grand Rapids. These exhibits were sponsored by various organizations and institutions.

Despite the great expense of providing a program of General Assembly essayists from out-of-state, a substantial profit again accrued to the Society as the result of a large and well-developed technical exhibit.

The difficulties of transportation in 1942 failed to in any way curtail the number of technical exhibits or to interfere with the appearance of the guest essayists, many of whom came long distances.

Every available exhibit space was sold; the registrants showed a keen interest in the exhibits, giving very generously of their time to the exhibitors.

County Secretary Conferences

Two County Secretary Conferences were held during the year, one in Lansing in January and one in Grand Rapids on the occasion of the Annual Meeting.

The January Conference featured one session held jointly with the County Health Director of Michigan and provided an excellent opportunity for an exchange of ideas with the health group.

The general program of the January Conference was devoted to subjects of a war character—Selective Service, Procurement and Assignment and related subjects. It was attended by more of the county secretaries than any previous conference.

Committees

All committee programs and projects were conducted without interruption during the year, despite the ever-mounting number of medical activities occasioned by the war conditions.

Most of the committee plans are of a long-range variety, and their continuity has been efficiently maintained.

Unfortunately time and space do not permit a detailed account of such committee's activity, but the high standard of committee endeavor was maintained in 1942.

Society Activities

During 1942 consistent contact was had with practically each of the 55 component societies through District Councilor meetings. These were attended by Councilors and officers and some committee chairmen and members.

Reports made on the occasion of these meetings showed a keen awareness on the part of each county unit of the activities and projects of the parent organization.

During 1942 your two secretaries contacted practically every county society.

The final development of the "Michigan State Medical Society Foundation for Postgraduate Medical Education" was completed in 1942, and the initial appropriation of $10,000 recommended by the 1941 House of Delegates was applied to this worthy endeavor.

Dissemination of society activity news was continued during the year by the issuance of nine Secretary letters. Of these five were sent to County Presidents and Secretaries and four went to every member of the society. In addition, three Victory Bulletins were mailed, two to County Society Medical Preparedness Committee members and one to all Members of the Society.

We now face another year of state society activity with the realization that more and bigger problems face those of the profession who are left at home to carry on organizational functions, and to maintain the professional practice of medicine.

We record with pride the honor roll of nearly 1,500 Michigan doctors of medicine serving with the armed forces. This splendid record, however, brings to bear upon our remaining members the responsibility of solving the inevitable postwar economic and social problems of medicine, and calls the vigilance in State and National affairs necessary especially during war time.

I respectfully recommend:

1. That during the year, due to transportation difficulties, the various district meetings be eliminated and that the inter-society public relations be maintained in so far as possible through communications and officer-committee-chairmen-Councilor-contact with the various components, and

2. That clarification be made of "Military Membership," especially concerning dues and postwar remissions.

3. That a study be made of definite plans for postwar postgraduate work and medical refresher courses designed to aid physicians returning from the armed forces; that the report of this study be presented to The Council at its next session.

Your Secretary cannot express too sincerely and earnestly to This Council his appreciation of its splendid coöperation and encouragement during the past year. Much commendation is due the committees for their splendid spirit and untiring efforts in the successful execution of many difficult tasks.

To Mr. Burns, Executive Secretary, and the executive office personnel, too much appreciation of their untiring efforts cannot be expressed. It is with regret that we record the loss of Mr. Lynn Leet of the executive office. He now serves as a First Lieutenant with the armed forces.

Mr. Burns is ever most helpful and coöperative and a true inspiration. To all of those who have aided so generously in the discharge of the duties of this office, your Secretary is truly grateful.

Respectfully submitted,
L. Fernald Foster, M.D., *Secretary.*

4. *The Treasurer's Annual Report* was presented by Wm. A. Hyland, M.D., and *referred to the Finance Committee.*

TREASURER'S ANNUAL REPORT—1942

As Treasurer of the Michigan State Medical Society, I wish to submit the following report for the year 1942.

During the year, a total of $491.25 was received as income from interest coupons and dividends on bonds in the Treasurer's account, with interest accruing on United States Treasury Bonds, $194.50, not included.

The present value of the bonds and securities held by the Michigan State Medical Society, quoted market values as of December 1, 1942, is $22,452.00.

The following bonds were transferred to the Michigan State Medical Society Foundation for Postgraduate Education:

Five United States Treasury Bonds.
One Consumers Power Bond.
One United Light and Power Bond.
One Standard Oil Bond.
One Government of the Dominion of Canada Bond having a total market value on September 4, 1942, of $9,359.00, plus accrued interest of $102.22, making a total of $9,461.22.

In addition, two $1,000 Associated Gas and Electric Bonds were sold at market value on October 1, 1942, for $209.00. The money from this sale, plus $329.78, totalling $538.78, was deposited also with the Michigan National Bank as Trustee for the Michigan State Medical Society Postgraduate Fund, totalling $10,000.00.

Total cash on hand on December 31, 1942, in the Michigan National Bank of Grand Rapids—$772.80, (including disc. float. acct. $72.53).

The following securities were held by the Michigan State Medical Society on December 31, 1942.

	Quoted Market Value December 31, 1942
American Telephone and Telegraph	$ 2,150.00
Government of the Dominion of Canada	977.50
Canadian Pacific Railroad	1,440.00
Consolidated Oil Corporation	1,037.50
Consumers Power Company	1,075.00
Detroit Edison Company	2,212.50
New York Central Railroad	527.50
Union Pacific Railroad	977.50
United Light and Power Company	1,065.00
Grand Rapids Affiliated	880.00
Government Bonds carried at full value	10,109.50
	$22,452.00

Respectfully submitted,

WM. A. HYLAND, M.D., *Treasurer.*

5. *The Trustee's Annual Report* was presented by Wm. A. Hyland, M.D., and *referred to the Finance Committee:*

ANNUAL REPORT OF TRUSTEE FUND OF MICHIGAN STATE MEDICAL SOCIETY—1942

As Trustee for the Michigan State Medical Society, I wish to submit the following report for the year 1942:

The following bonds are held in trust for the Michigan State Medical Society:

Two New England Gas and Electric Bonds.
Two Southern Pacific Railroad Company Bonds.
One Grand Rapids Affiliated Bond.
One New York Central Railroad Bond.

The present value of these bonds is $3,517.50.

On August 25, 1942, one Grand Rapids Affiliated Bond was sold to General Fund for $939.50 to help take care of current expenses.

During the year 1942 a total of $325.00 was received as interest income on these bonds.

A total of $1,350.32 was paid out for legal fees during the year 1942.

Bills as yet outstanding amount to $70.83.

At December 31, 1942, there was no cash on deposit. Total value of Trustee Fund is $3,517.50.

Respectfully submitted.

WM. A. HYLAND, M.D., *Treasurer.*

6. *The Editor's Annual Report* was presented by Wilfrid Haughey, M.D., and *referred to the Publication Committee:*

EDITOR'S ANNUAL REPORT—1942

The form and appearance of THE JOURNAL has been continued throughout the year—except for two minor changes. The Readers' Service has been changed: instead of a page or two among the advertising pages, we are now using a short synopsis of the article in the heading of each paper, thus giving the reader a more compact survey of the paper without the necessity of turning pages. We would like to know the readers' reaction to this change which was approved by the Publication Committee in September. The other change has been the discontinuance of "Fifty Years Ago"—those reprints of papers published fifty years ago have a distinct historical value which is appreciated, but they were taking up too much space at the expense of current papers. We are considering other methods of developing interest in the history of medicine.

During the year we have published ninety-three original papers with an average of four and one-half pages in length. These have reached practically all fields of medicine, including the specialties, but all papers have been written with general practitioner reader-interest as the main factor. Twenty papers have been given strictly to general practice and nineteen to general interest. Twelve were eye, ear, nose, throat and bronchi—the largest group devoted to any one branch of medical practice. There were nine papers devoted to surgery, seven to chemotherapy, six to obstetrics, five to dermatology and urology, four to pediatrics, three to anesthesia, three to x-ray; the rest were scattered.

There have been forty-nine editorials and ninety-nine book reviews.

In August, Editor Holmes was called into the armed forces as a Major and sent to service. He turned the editorial material over to the chairman of the Publication Committee who carried on with the approval of the Council at the Grand Rapids meeting.

The Acting Editor found five papers from the 1941 meeting not yet printed, due to lack of space. That prompted the temporary suspension of "Fifty Years Ago." Of those papers all but one have been published and that one only came to hand less than a week ago. It will be our endeavor to have all of the current year's annual meeting papers published before the next year's meeting. There may be a problem in this regard because of the present dearth of papers being prepared and presented. With so many of our men in the war and the rest so busy, it is difficult to prepare papers.

Editor Holmes and the Acting Editor wish to take this opportunity to thank the Publication Committee for valuable help and sympathetic understanding, and especially Mr. Wm. Burns, the Executive Secretary, for most valuable suggestions and assistance.

Respectfully,

WILFRID HAUGHEY, M.D.

7. *Reports of Committees of the Council:*

(a) *The County Societies Committee report* was presented by W. H. Huron, M.D., Acting Chairman and *referred to the Finance Committee:*

ANNUAL REPORT OF COUNTY SOCIETIES COMMITTEE—1942

(1) *Roll Call.*—The meeting of January 15, 1943, was called to order at 8:10 p.m. in the Statler Hotel, Detroit, by W. H. Huron, M.D., Chairman pro-tem. Those present: Doctors Huron, R. J. Hubbell, P. A. Riley and A. H. Miller; also H. H. Cummings, M.D., and A. S. Brunk. Absent: E. F. Sladek, M.D., Chairman.

(2) *Postgraduate Medical Education Programs for County Societies.*—This was discussed, and it was recommended that every effort be made by county medical societies to maintain staff and county society meetings; where it is impossible or not feasible to bring in outside speakers, the local members should present programs and make more use of the MSMS Speakers' Bureau.

The County Societies Committee also recommends that the Postgraduate Conferences in those cities where they are held at present be scheduled to coincide with county society meetings, in order to bring the greatest number to the postgraduate sessions. It was also felt that the special postgraduate program for the Upper Peninsula should be continued, if possible.

(3) *Radio Activity During Wartime.*—The program of radio presentations as carried on by the MSMS Radio Committee under the chairmanship of Hugh Beebe, M.D., was discussed. It was the opinion of the County Societies Committee that Dr. Beebe is doing an excellent job; many favorable comments have been received on his program being broadcast over WJR every Wednesday night.

(4) *Proposed Program of Examination of High School Students.*—C. D. Barrett, M.D., Health Commissioner of Ingham County, entered the meeting at this point. He presented a plan for examination of high school students preliminary to a course of training in school to "harden" the students for future service in the armed forces. It was felt by this committee that such examinations at this time would necessarily be incomplete (blood count, urinalysis and complete physical examination), in view of the shortage of physicians, and the fact that most school children have received such examinations prior to their entrance into school, and following it, but it was the consensus of opinion

of this committee that wherever and whenever it is possible to secure physical examinations of all pupils in strenuous exercise, this should be done.

(5) *Group Disability Insurance.*—The Committee recommended that action on a group disability insurance program be postponed until after the County Secretaries' Conference in Lansing, January 24, and a consensus of opinion on the subject be obtained from the secretaries at that time.

(6) *Postgraduate Work After the War.*—This was referred to the Postgraduate Education Committee, for further study and an early report to the Council.

Respectfully submitted,

W. H. Huron, M.D.
R. J. Hubbell, M.D.
A. H. Miller, M.D.
P. A. Riley, M.D.

7. (b) *The Finance Committee report* was presented by V. M. Moore, M.D., Chairman; also the budget estimates for 1943. Dr. Moore recommended that if the Industrial Health Clinic scheduled for April 8, 1943, should cost in excess of $200, earmarked in the Industrial Health Committee's budget for this purpose, the additional sums needed could be charged against the Cancer Committee budget up to a maximum of $200, if necessary, and that this has the approval of the chairman of the Cancer Control Committee.

This report was *referred to the Publication Committee:*

ANNUAL REPORT OF FINANCE COMMITTEE—1942

(1) *Roll Call.*—The meeting of January 15, 1943, was called to order in Parlor C of the Statler Hotel, Detroit, at 8:15 p.m. by V. M. Moore, M.D., Chairman. Those present: Drs. Moore, P. L. Ledwidge, R. S. Morrish and W. E. Barstow; also Secretary L. Fernald Foster, M. D. Absent: L. J. Johnson, M.D. Doctors H. H. Cummings, A. S. Brunk, C. R. Keyport and B. R. Corbus also came into the meeting.

(2) *Bills Payable* were presented, including expenses of the Executive Secretary, checks for postage and $400.00 to the Joint Committee on Health Education (out of its 1942 unexpended budget allotment). Motion of Drs. Barstow-Ledwidge that these be approved. Carried unanimously.

(3) *Ernst & Ernst Report.*—The report of the Ernst & Ernst audit for 1942 was studied and approved, motion of Drs. Ledwidge-Morrish. Carried unanimously.

(4) *Financial Picture for 1943.*—It was estimated there will be 3,630 dues-paying members at $12.00, totaling $43,560.00. Less the allocation to Journal of $5,445.00, the total will be $38,115.00 for society activity, with interest and miscellaneous items totaling $38,365.00. It is estimated there will be a shortage of income this year over last year of about $8,000.00, due to nonpaying military members.

(5) *Technical Exhibit for 1943.*—It was reported that the technical exhibit space is all under contract. While there is a reduced number of spaces this year, we trust the meeting will be self-sustaining.

(6) *Secretaries' Expenses.*—The expenses of the Secretary and of the Executive Secretary were authorized to be continued as in 1942.

(7) *Consideration of Budget.*—(a) Journal items: these were considered and approved. (b) MSMS items were studied, The completion of the integration of the MSMS postgraduate program during 1943 in Wayne County *will require* an increase in the Postgraduate Committee budget of from $500 to $700. It was moved by Drs. Ledwidge-Morrish that the budget as revised be submitted to the Council.

(8) *Springer Resolution.*—On motion of Drs. Morrish-Ledwidge, the following statement was adopted:

"The resolution to raise a fund to educate children of certain physicians by a contribution of $1.00 per member per year until an adequate fund has been raised has been considered. It will be recalled that the Committee on Resolutions of the House of Delegates (A. E. Catherwood, M.D., chairman) voted against the resolution but asked that it be referred to the Finance Committee of The Council for further consideration."

This committee would quote the Constitution of the Society, Article 2, as follows: "Purpose:

Section 1. The purposes of this Society are to promote the science and art of medicine, the protection of the public health and the betterment of the medical profession, and to unite with similar organizations in other States and Territories of the U. S. to form the American Medical Association."

It is our considered opinion that while the motive behind the resolution is laudable, provision for such activity is not specified in the Constitution and we therefore cannot recommend its adoption.

Respectfully submitted,

V. M. Moore, M.D.
W. E. Barstow, M.D.
P. L. Ledwidge, M.D.
R. S. Morrish, M.D.

7. (c) The *Publication Committee* report was presented by R. C. Perkins, M.D., Chairman, and *referred to the County Societies Committee:*

ANNUAL REPORT OF PUBLICATION COMMITTEE—1942

(1) *Roll Call.*—The meeting of January 15, 1943, was called to order by Chairman R. C. Perkins, M.D., in the Statler Hotel, Detroit, at 8:30 p.m. All members of the committee were present (Drs. Perkins, Beck, DeGurse, Stryker, Umphrey); also Acting Editor Haughey and Executive Secretary Burns. Also present for a portion of the meeting were President Cummings, Council Chairman Brunk and Past President Corbus.

2) *Budget Estimates for* Journal *for 1943.*—These were studied. During discussion, motion was made by Drs. Umphrey-Beck that the Publication Committee recommend to The Council that Wilfrid Haughey, M.D., be offered the editorship of The MSMS Journal for the coming year at the same salary and expense account ($1,200 salary and $900 expense account). Carried unanimously.

The budget estimates were revised in several items so that the total income and total expense amounted to $18,350. Motion of Drs. DeGurse-Stryker that the budget estimates for The Journal, 1943, as amended, be approved and referred to the Finance Committee. Carried unanimously.

(3) *Editor's Annual Report* was presented by Dr. Haughey. Motion of Drs. DeGurse-Beck that the report be received and respectfully referred to The Council for its approval. Carried unanimously.

(4) *Advertising Matters.*—The annual rebate of the CMAB amounted in 1942 to $1,102.56. The committee recommended that the CMAB be commended for its excellent work during the past twelve months.

(b) Color inserts: The cost of these inserts was discussed and the committee recommended, on motion of Drs. Stryker-Umphrey, that the 3-page rate be retained, subject to the recommendation of the CMAB. Carried unanimously.

(c) The acceptance of advertising of products, not as yet accepted by the AMA Councils, was discussed. Motion of Drs. Umphrey-Beck that these prospective advertisements be not accepted in the MSMS Journal until definite standards concerning them are established by the AMA Councils. Carried unanimously.

(5) Encouragement to MSMS members to contribute articles to their Journal. The committee recommended additional encouragement, since not too many papers

are being received from Michigan men. The committee felt that outstanding papers read before the Wayne County Medical Society and other county societies, as well as those presented through the stimulation of the Foster Foundation might well be considered. Further, that articles on medical history be encouraged, and that radio talks presented by the MSMS Radio Committee also be utilized. It was recommended that the Editor write an editorial on material or articles that would be welcome in the MSMS JOURNAL, suggesting subjects, in order to encourage writers from the Michigan profession.

(6) *Problem of Frequent Changes of Address.*—This was presented and thoroughly discussed. The problem arose mainly from physicians in military service who are being transferred frequently during the course of a year. Perfect tabulation in THE JOURNAL office would require the services of one extra full-time employe. Motion of Drs. Umphrey-Stryker that, if information is received from the postal authorities that shipments of mail to foreign countries shall be discontinued, then the MSMS JOURNAL shall not be forwarded to members abroad. Carried unanimously.

President Cummings felt that THE JOURNAL should be sent to the last permanent address of the members in military service, in which Dr. Umphrey and other members concurred. Motion of Drs. Beck-Stryker: after notification in a JOURNAL editorial and in the Secretary's Letter to all members, the MSMS JOURNAL be sent to all men in military service, addressing same to the last permanent address; if no permanent address is furnished, THE JOURNAL be discontinued inasmuch as the copies are lost. Carried unanimously.

The Committee recommended that the executive office send a final notification (form letter) together with the postoffice notification to the military member at his last-known address, as first-class mail, when multiple changes of address were received.

(7) *Publication of Information* on number of physicians available for civilan needs. This correspondence with Procurement and Assignment Service and Morris Fishbein, M.D., was presented, discussed and ordered filed.

(8) *Requests for Journals, as Exchanges.*—The Committee approved exchanges with the *New Orleans Journal, Urological and Cutaneous Review.* It disapproved extra exchange journals to Georgia, in conformity with its policy of saving costs.

Respectfully submitted,

ROY C. PERKINS, M.D.
O. O. BECK, M.D.
T. E. DEGURSE, M.D.
O. D. STRYKER, M.D.
C. E. UMPHREY, M.D.

7—(d) The report of the Chairman of the *Special Committee on Integration of Postgraduate Programs* was presented by C. E. Umphrey, M.D., Chairman, and *referred to the County Societies Committee:*

REPORT ON INTEGRATION OF POSTGRADUATE PROGRAMS

You will recall that at the November meeting of the Executive Committee a resolution was presented from the Wayne County Medical Society for information on the State Society's financial program referring to the fact that some activities such as postgraduate medical education which have state-wide application are financed locally in Wayne County. As a result of the discussion on that communication, a special committee as listed below was appointed to study the matter, to interview all interested parties, and to report back to The Council at its meeting of January 16-17, 1943.

Your subcommittee chairman begs to report that he met with the Committee on Postgraduate Medical Education at its regularly scheduled session in Detroit, December 2. At that time Dr. Bruce explained in detail the background of postgraduate medicine in Michigan and the accomplishments of the past and present which have resulted most favorably in our holding front rank in this field throughout the nation. The Wayne County situation was outlined to the Committee with particular reference to the Continuation School of Medicine, which began in 1939 and during the succeeding three years had a total enrollment of 923 by over 400 individuals. Thirty-six courses were offered the first semester; sessions were held weekly. Subjects taught included: general medicine, pediatrics, syphilology, dermatology, physiotherapy, neurology, clinical interpretation of laboratory procedures, tuberculosis, and contagious diseases. The enthusiasm and confidence shown stimulated expansion and development. Other courses were: electrocardiography, allergy, diabetes, diseases of chest and heart, gastro-enterology, industrial medicine and surgery, diseases of bones and joints, clinical examination of the heart, review of medical literature, anatomy, and first aid. The cost of operating the Continuation School of Wayne County was about $700 per year.

The Committee was requested to consider recommending an appropriation by the State Society of about that amount to carry on the established good activities in the Wayne County area. It was felt that this would be a suitable and reasonable expenditure inasmuch as the State Society has offered nothing in Wayne County along this line and its financial experience per capita outside of Wayne County indicates that the Wayne County Continuation School has been economical in its operation. The matter was discussed at great length by the Committee but no recommendations were made.

A communication later was sent out by Dr. Bruce to the members of the Committee in which your chairman was misquoted to the effect of having reported that the Continuation School of Wayne County would be forced to close for financial reasons unless it secured an appropriation from the State Society. It has been reported that this misquotation since has been corrected by Dr. Bruce in a letter to the members of the Committee on Postgraduate Education of the Michigan State Medical Society and to Dr. Brunk, Chairman of The Council. The facts are that because of the exigencies of wartime, with shortage of physicians, difficulties of transportation, et cetera, the Continuation School is not offering any special courses in addition to those held at the Wayne University College of Medicine and in the hospitals.

Your chairman has had many informal conversations with various interested people, some of whom have taken an active part in the postgraduate picture during recent years. He has not attempted to review the entire postgraduate situation throughout the state because the Committee did not see clearly the necessity of doing so, and also because an exhaustive survey did not seem to pertain to the specific request made originally by the councillor from Wayne.

A meeting was held January 14, 1943, called by the Advisory Council of the Continuation School of Wayne County. Those present were Drs. Ralph H. Pino, W. W. MacGregor, C. E. Umphrey, Harry F. Dibble, David Sugar, M. Raymond Collings, A. P. Biddle and F. Yonkman.

The Committee recommended that the request for an appropriation of $700 per year placed by Dr. Umphrey before The Council and the Committee on Postgraduate Education receive favorable consideration and be granted and that this figure be increased later in keeping with the augmented program anticipated when the Continuation School of Medicine resumes activity at the end of the war.

Furthermore, the Committee recommends that the Wayne County Postgraduate program be integrated with the State Postgraduate program and be published in full in the state brochure; furthermore, that if this be not done the Wayne County program will be catalogued and carried forward as an independent unit. The Com-

mittee makes these recommendations because, in view of the wealth of postgraduate material in Wayne County and the imperative need of a progressive program for the practitioners and with particular reference to the more than one thousand men who will be returning to the community from military service, the Committee regards it as a major responsibility to prepare now for a continuation program consistent with the opportunities and responsibilities.

Your chairman again wishes to offer for consideration the recommendation previously made to the Postgraduate Committee; namely, that The Council of the MSMS, in view of the splendid postgraduate program in Wayne County, set aside the sum of $700 annually at this time as a gesture of coöperation to encourage this necessary scientific effort augmenting the regular program of the Michigan State Medical Society.

Respectfully submitted,

C. E. Umphrey, M.D., *Chairman.*

President Cummings commented on the report of Dr. Umphrey, reiterating that Wayne County has fine teachers, hospitals, clinical facilities, and physicians deeply interested in postgraduate work; that the WCMS voluntarily withdrew in 1939 from the MSMS Postgraduate program and since has conducted its own very fine program; that if the WCMS with all its valuable teachers and courses already organized would integrate with the MSMS program, no attempt would be made by the State Society's committee to dictate the Wayne County courses, but that direction must be placed in some group, in order that it may be responsible and report to the MSMS Council.

8. *Reports of MSMS Committees.—*

(a) *Joint Committee on Health Education Representatives'* report was presented by B. R. Corbus, M.D., Chairman, who stated that the *Detroit News* column had been discontinued due to lack of funds. Dr. Corbus gave the background and history of the Joint Committee, mentioning the excellent library of movies which the Joint Committee possesses. He recommended that the work of the Joint Committee be continued so far as talks and radio presentations are concerned, with the elimination of the *Detroit News* column, and that the MSMS continue to subscribe to the Joint Committee in a limited way. The report was referred to the Finance Committee.

President Cummings stated that the Joint Committee has done much good work and accomplished a great deal, and approved the recommendations of Dr. Corbus.

REPORT OF JOINT COMMITTEE ON HEALTH EDUCATION

The Joint Committee on Health Education has come of age. During these twenty-one years the State Society has been liberal in its contribution to its work. For several reasons, which I will later state, I, as chairman of the Joint Committee as well as chairman of the Representatives from the State Society, feel obligated to make to you a report, and to ask you for your advice as to the future.

If you will bear with me for just a few minutes I should like to give you a very brief history of the Joint Committee.

In 1921 Dr. Kay, then president of the State Society, with Dr. J. B. Kennedy and Dr. Angus McLean, met with President Burton and Drs. Huber and Cabot, to discuss the "development of a plan for a series of medical lectures to the laity" to be undertaken jointly by the Society and the University.

Earlier experimental effort had definitely indicated that the public in general was both apathetic and indifferent to instruction in matters of health hygiene. Dr. Burton was most sympathetic with the idea, and suggested that the University might justifiably use the machinery of the Extension Division for the dissemination of such information. In keeping with policy a campaign was planned which contemplated programs of health lectures disseminated in the school system of the state, and to all adult groups that could be interested in a crusade for better and more wholesome life.

A program as extensive as this would, so the founders thought, be of interest to other groups who similarly felt the need for lay health education. So such other units as the Detroit University (now Wayne), Michigan State College, the State Department of Health, and the Anti-Tuberculosis Society were invited to join in the movement. So came to be the Joint Committee on Public Health Education. From time to time other organizations were added to this unit until now our letter head carries the names of twenty-four such organizations.

The organization was headed by the president of the University until some six years ago. Since that time I have been the chairman. As we got going in this work the University became much interested, and for some years it paid the salary of a part time field man, gave us the part time services of Dr. Henderson, head of the Extension Division, and carried largely the expenses of operation.

In this period a special campaign was directed to the health education of the school child and in 1929-30, five hundred physicians appeared before audiences totaling 220 thousand.

It was at about this time that the *Detroit News* suggested that the committee undertake to conduct a Daily Health Column, and this has been and is being continued.

With the depression period the University was forced to withdraw the salary paid the field secretary, and the income from other sources was materially lessened, and in the period of 1932-35 our activities were limited to a curtailed Speakers' Bureau and the Health Column.

In 1935 Dr. Ruthven, as chairman, was asked to appoint a committee to see where we might advantageously enlarge the scope of the program, and to further consider the very important question of the financing of the work.

The committee appointed for the purpose of interpreting the needs which might be met by this committee, especially emphasized the need for the effectual presentation of matters of health to the school child. The results of our earlier experiment did not seem to fully justify the amount of work that was put into it. At this time a program was proposed to bring health education to the teacher that he, in turn, might present it to the child. This involved, of course, the development of curricular materials and it meant the establishment of a definite permanent curricular program in our schools of the state, to be presented by a teacher who had had some instruction in its presentation.

This quite ambitious program was presented first to the Department of Public Instruction and the Department of Health, which were enthusiastic about the idea, and then our problem was to see how it could be financed. From various sources we obtained liberal financial support, largely, but not entirely, from the Couzens Fund and the Kellogg Foundation. With this support we were able to hire a fulltime secretary whose part duty it was to promote public lectures and initiate our radio program, while, at the same time, a subcommittee composed of educators, health workers and doctors, was busy drawing up the curricula. In addition there were initiated conferences on health education at the different state teachers' colleges. These were the years of our greatest activity. In these years a number of bulletins were issued. "The Problem Solving Approach in Health Teaching" was one. "Experiences in Healthful Living," "Health Goals of the School Child," and a bulletin on which much work was put but which was never, in its entirety, released—"Mental, Social and Personal Hygiene, An Interpretation of Sex Education."

These bulletins were sent all over the United States,

and are still in demand. In their publication, in many instances, we were assisted by the State Department of Health.

So much for our past activities. I think you will see that the Joint Committee is a unique organization which is geared to do big things in the field of health education. However, as time has gone on, I am conscious of a lack of interest in the constituent units. As long as Dr. Pritchard lived he went along with us with very substantial contributions. Last year our only contribution, outside the Michigan State Medical Society, was one hundred dollars from the Hospital Association. It is true that many of these units have no funds to draw upon.

The Extension Division of the University furnishes the machinery for the dissemination of our radio programs and for the Speakers' Bureau, and the University seems to be willing to go on with this contribution. I think it may be said that no State Society health committee has as great an opportunity for successful operation as we have through our tie-up with the Extension Division, and no more sympathetic enthusiast than Dr. Charles A. Fisher, who is head of that division and who acts as secretary of the Joint Committee.

Respectfully submitted,
B. R. Corbus, M.D., *Chairman.*

STATEMENT OF RECEIPTS AND EXPENDITURES, JOINT COMMITTEE

1941-1942

Receipts:		
Balance on hand July 1, 1941	$110.00	
Sale of bulletins	15.66	
Contributions—Medical Society	700.00	
Total receipts		$825.66
Expenditures:		
Postage	$ 48.00	
Pay Roll—speakers	520.00	
Office supplies	113.15	
(Publicity fund $64.03)		
Mimeographing	11.73	
Slides	3.50	
Parcel Post	.70	
Refund on bulletins (paid twice)	2.10	699.18
Balance on hand July 1, 1942		$126.48

RANGE OF HEALTH TOPICS DISCUSSED BY SPEAKERS

1941-42 and 1940-41

	1941-42	1940-41
Child Psychology	7	7
Child Growth and Development	15	20
Nutrition	4	
Mental Hygiene	15	39
Adolescence	2	
Child Health	4	10
Pre-School Child	1	3
Dentistry	2	4
Syphilis and Sex Education	4	4
Allergy	1	2
Physical Education	1	
Immunization		2
Psychiatry		1
Cancer Control		10
Preparation for Marriage		1
Juvenile Delinquency		2
General Health		3
Speech Correction		3
Totals	56	111

8—(b) The report of the *Cancer Committee* meeting of December 18 was presented by Wm. A. Hyland, M.D., and adopted on motion of Drs. Hyland-DeGurse. Carried unanimously.

8—(c) The report of the *Syphilis Control Committee* of December 20 was read by Secretary Foster. An extract of the Legislative Committee's minutes of January 14 meeting (Item 11) concerning the recommendations of the Syphilis Control Committee (in Item 4 of 12/20 minutes), was presented. Motion of Drs. Ledwidge-Perkins that the minutes of the Syphilis Control Committee, as amended by the Legislative Committee in its Item 11, be accepted with an instruction to the Syphilis Control Committee that the proposed amendments to the Premarital Examination Law be introduced into the Legislature by the State Department of Health, as an aid in their early passage. Carried unanimously.

8—(d) The report of the *Preventive Medicine Committee* meeting of January 7 was read by the Executive Secretary and accepted on motion of Drs. Huron-Barstow. Carried unanimously.

8—(e) The report of the *Legislative Committee* meeting of January 14 was read by the Executive Secretary. Dr. Keyport presented the new draft of a proposed amendment to the Medical Practice Act which would permit licensing of graduates of medical schools having telescoped courses.

A letter from the Wayne County Medical Society was read which contained a resolution re endorsement of persons who favor federalized medicine seeking public positions. Motion of Drs. Perkins-Stryker that the Legislative Committee report, except Item 6, be approved, was carried unanimously.

Referred to the Publication Committee were: (1) new draft of proposed amendment to Medical Practice Act; (2) WCMS Resolution re persons seeking public positions who favor federalized medicine.

8—(f) *Medical-Legal Report* concerning two cases was accepted on motion of Drs. Stryker-Perkins. Carried unanimously.

8—(g) Report on the *Industrial Medical and Surgical Clinic* being arranged by the Industrial Health Committee for April 8 in Detroit was presented and accepted.

Recess for Luncheon

SECOND MEETING

January 16, 1943—1:45 P.M.

9. *Report on Survey of Adequacy of Medical Care for Civilian Needs.*—The Executive Secretary presented the following digest of this survey made by county society secretaries covering seventy-seven counties, to January 15, 1943:

18 secretaries report clinical shortages of physicians in certain areas
9 secretaries report abnormal increase in population since 1940
66 physicians need to be re-located (60 general practitioners; 1 general surgeon; 1 industrial surgeon; 3 obstetricians, and 1 pediatrician)
In 29 areas needing 66 additional physicians:
375 physicians were practicing December 7, 1941; (no figures given by Wayne County)
262 physicians were practicing December 7, 1942; (no figures given by Wayne County)
132 physicians were called into service.
No report was filed by Secretaries of Cass, Gratiot-Isabella-Clare, Lapeer, and Washtenaw counties, as of January 15.

Motion of Drs. Perkins-Keyport-Haughey that the report be accepted and presented at the County Secretaries Conference of January 24 and published in The Journal. The survey was discussed by Drs. Ledwidge, Brunk, Miller, Foster. Motion carried unanimously.

A letter from S. W. Donaldson, M.D., Ann Arbor, re a survey of adequacy of medical care in the Willow Run district was read. President Cummings reported that the physicians of Washtenaw County are handling the situation satisfactorily and need no outside help.

10. *1943 Annual Meeting.*—Dr. Riley suggested the appointment of a Committee on Hotels to aid with the housing situation at the 1943 Postgraduate Conference on War Medicine in Detroit next September. Motion of Drs. DeGurse-Beck that the Chair be authorized to appoint a Committee on Hotels for the 1943 conference. Carried unanimously.

11. *"Labor and Industry."*—This magazine, the organ

of the Department of Labor and Industry, has requested an article on the survey of adequacy of medical care for civilians. Motion of Drs. Ledwidge-Barstow that such an article be authorized and forwarded from the President and Secretary of the Society, the story to indicate that a small number of physicians need to be re-located but that no need exists for the importation of out-of-state physicians in Michigan. The matter of relocation was discussed by Drs. Riley, Haughey and Foster. The motion was carried unanimously.

12. *Rehabilitation Program of Michigan State Board of Control for Vocational Education.*—The Executive Secretary reported that $10,000 of federal-state monies have been set aside for this experimental program in Michigan, to be used from January 1 to June 30, 1943. Michigan has been selected as the test state. The official release (VR-14) from George H. Fern, Director, stated:

> "For the balance of this fiscal year physical restoration services, including medical care, surgical repair, physical therapy, and occupational therapy, are authorized for rehabilitation cases.
>
> "This service may be granted under the following conditions:
>
> (a) If it will assist the physically disabled to become employable.
>
> (b) If recognized hospitals, doctors, physical therapists, and occupational therapists are used.
>
> (c) If no other method of financing physical restoration service is available.
>
> (d) If the expenditure in each case is reasonable in amount."

Discussed by Drs. Riley, Haughey, Huron, Ledwidge and Perkins. Motion of Drs. Ledwidge-Huron that committee of three be appointed to contact the State Board of Control of Vocational Education and to use its influence so that proper coöperation in this experiment be obtained. Carried unanimously. Those appointed on the committee were: P. L. Ledwidge, Chairman; R. C. Perkins; P. A. Riley.

13. *National Conference on Medical Service.*—Motion of Drs. DeGurse-Miller that the President, the Chairman of the Council, the Editor, and the Secretaries be authorized to attend this Conference in Chicago on February 14. Carried unanimously.

14. *Crippled-Afflicted Children Legislative Conference of January 8, 1943.*—The Executive Secretary reported on the proposed changes in the Afflicted and Crippled Child laws approved at this meeting, that a drafting committee (of which H. A. Miller, M.D., was the MSMS representative) had been appointed to present amendments to these Acts to the Legislature in February. The matter was discussed and the report was adopted on motion of Drs. Miller-Huron. Carried unanimously.

15. Progress report of Chairman of *House of Delegates Committee on Constitution and By-laws re Resolution concerning Emeritus Membership* for physicians attaining seventieth year, was presented and discussed by Secretary Foster and Drs. Miller and Huron. Motion of Drs. Haughey-Umphrey-Keyport that the progress report be accepted and that the Executive Office continue to coöperate with the Chairman of the Constitution and By-laws Committee (C. L. Hess, M.D.), in supplying him with membership and statistical data. Carried unanimously.

16. *Resignation of Councilor L. J. Johnson, M.D.*—President Cummings presented the resignation of Dr. Johnson, now in the Navy. Motion of Drs. DeGurse-Barstow that the resignation be accepted with regret. Carried unanimously.

A motion was made by Dr. Ledwidge and seconded by all that a letter be dispatched to Lt. Commander L. J. Johnson, M.C., USN, informing him that his presence at this meeting was missed, that his advice at past meetings of The Council was sincerely appreciated, and that The Council wishes him a satisfactory and medically-profitable experience in his new work and hopes that he may return to Michigan soon with Victory 'round his shoulders. Carried unanimously.

New Councilor—The President nominated Dean Myers, M.D., of Ann Arbor to fill the vacancy for the unexpired term. Motion of Dr. Morris, seconded by Drs. Barstow-Keyport, that the nomination of Dr. Myers be accepted and approved. Carried unanimously.

17. *Letter of thanks from Lieutenant Colonel H. A. Furlong, M.C.*—This letter from Dr. Furlong, recently resigned Director of the Michigan Council of Defense and of the Selective Service of Michigan, was read by the Executive Secretary, and ordered placed on file.

18. *Reimbursement from Procurement and Assignment Service.*—The Executive Secretary reported that neither the State Society nor any county medical society which had expended funds for Procurement and Assignment Service work has been reimbursed.

19. *Reports of individual councilors* on the condition of the profession in each Councilor District. These verbal reports were presented in detail by Councilors Barstow, Stryker, Perkins, Haughey, Beck, DeGurse, Morrish, Hubbell, Huron, Moore, Miller, Riley and Umphrey. A number of war casualties were reported. In general, the condition of the profession in all parts of the state is very good and few major problems exist.

Recess for Reference Committee Meetings

(To be concluded in March issue.)

Reading Notices

VITAMIN FILMS IN COLOR

During the past year the three 16-mm. silent motion pictures in color, describing certain vitamin deficiency diseases, which were made available by Eli Lilly and Company, Indianapolis, for showing before medical groups under sponsorship of a physician, have been in continuous demand. One film deals with deficiency of thiamine chloride (beriberi), another with nicotinic acid deficiency (pellagra), and the third with ariboflavinosis. To meet increasingly frequent demands for the films, additional new prints have been placed in circulation and are now ready for loan. The major part of all films concerns the clinical picture presented by the patient with reference to treatment by diet and specific medication. They do not contain advertising of any description, nor is the name of Eli Lilly and Company mentioned.

WAR PRODUCTION BOARD ORDER AFFECTS VITAMIN CAPSULES

To conserve vitamin A supplies during wartime, WPB order L-40 limits the content of capsules to 5,000 vitamin A units.

In compliance with this order, capsules of Mead's Oleum Percomorphum 50% with Viosterol now contain 83 mg. of oil, equivalent to 5,000 vitamin A units and 700 vitamin D units per capsule.

The new size capsule is now supplied in boxes containing 48 and 192 capsules—about twice the number of capsules without increase in price.

ACUTE CONTAGIOUS CONJUNCTIVITIS

In order that industry may be on guard, the Michigan Department of Health is taking this means of relaying information concerning an unusual type of eye infection. These cases first occurred at Pearl Harbor in the summer of 1941 and in the shipyards in Oregon the following October. While most of the cases have been confined to industrial workers, a few cases have occurred in family members.

Recently the United States Public Health Service reported the occurrence of this disease in several war plants throughout the country. Several such cases have occurred in Michigan during the past two or three weeks.

We ask your coöperation in relaying the following information and collaborating with your plant physicians in this problem.

An excerpt from the United States Public Health Service report is as follows:

Sporadic epidemics of conjunctivitis are occurring in war plants. Similar epidemics were confined to the West Coast last year, but recently as many as three hundred cases have appeared in a single plant in the East. The infection does not appear to be of occupational origin, but is supposed to be by person to person transmission.

A virus has been isolated in the East which corresponds to that believed to be responsible for the Western epidemic. Average duration of the disease, in untreated cases, is three to four weeks. There is an acute stage in which there is swelling of the eyelids and enlargement of the small sacs of the membrane which lines the eyelids, especially on the upper lid. Eyes appear inflamed and "bloodshot." In typical cases there is swelling of the glands in front of the ear.

Following such infection, parts of the transparent covering of the eyeball may become impervious to light. The corneal opacity may last as long as six months, and in some cases, vision of workers may suffer permanent impairment.

Onset of the infection usually is in but one eye; less than one-fourth the infections begin in both eyes. The severe reactions produced in the course of the disease necessitate the workers' absence from the job for as long as a week or ten days in cases under treatment.

Workers are losing time from important war effort because of conjunctivitis; it is important to prevent the spread of this infection to other industries. Your cooperation is sought.

Preventive Measures

1. Isolation of the patient as soon as symptoms are noted, with proper advice concerning preventive measures to all contacts.
2. Aseptic technique in handling eye cases.
3. Sterilization of eye droppers and eye instruments.
4. Sterilization of eye treatment solutions.
5. Sterilization of eye goggles, et cetera.

It would be appreciated if prompt notification be made to the Michigan Department of Health of cases occurring in your vicinity.

ADEQUACY OF MEDICAL SERVICE FOR CIVILIANS

The report on the Survey of Medical Service Available for Civilians, conducted through county medical society secretaries, indicates that about three score physicians, at most, need to be relocated in Michigan to give service in all localities. Based on other surveys of similar nature (such as that made by the Procurement & Assignment Service) this reported need is high.

Reports from Seventy-nine (79) Counties

The report for seventy-nine counties, received to January 21, 1943, is as follows:

18 secretaries report critical shortages of physicians in certain areas.

10 secretaries report abnormal increase in population since 1940.

66 physicians need to be relocated (60 general practioners; 1 general surgeon; 1 industrial surgeon; 3 obstetricians and 1 pediatrician).

In 29 areas needing 66 additional physicians,

375 physicians were practicing on Dec. 7, 1941 (Wayne County not included)

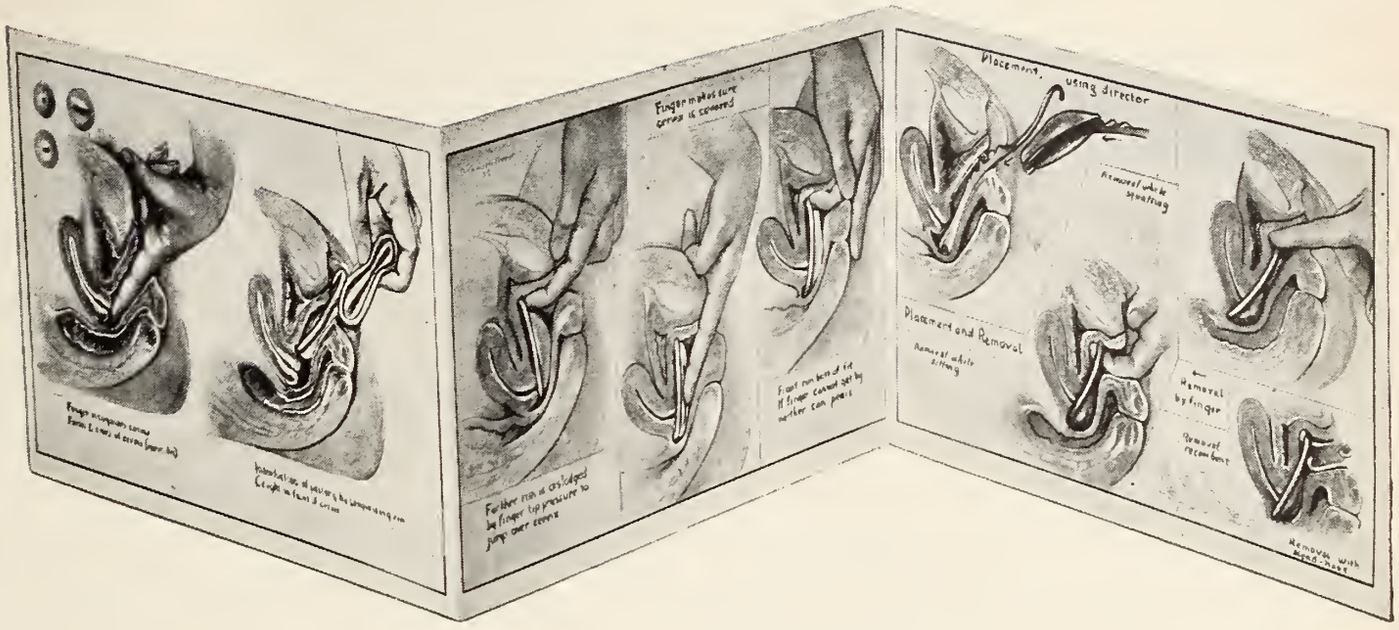
262 physicians were practicing on Dec. 7, 1942 (Wayne County not included)

132 physicians were called into service (Wayne County not included)

Publicity on the manner in which the medical profession is meeting military, industrial, research, and civilian needs during wartime should be spread by members of the medical society, to counteract unreliable propaganda.

Compilation of the survey, made by the State Society, indicates that no avalanche of physicians from other states is needed in Michigan. Only a few score must be relocated in this state in order to cover overpopulated localities and to bring to all our people the service they require. The medical profession is most desirous that the type and quality of medical practice which has made Americans the healthiest people in the world will be continued.

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MICHIGAN'S DEPARTMENT OF HEALTH

H. ALLEN MOYER, M.D., Commissioner, Lansing, Michigan

UNDULANT FEVER INCIDENCE IN 1942 DOUBLE THAT OF TYPHOID

Reported cases of undulant fever in Michigan in 1942 were almost twice as many as reported typhoid cases, the Michigan Department of Health points out in a warning against the use of unpasteurized milk. Ten years ago, typhoid fever was about 12 times as prevalent as undulant fever.

STATE'S BIRTH TOTAL HIGHEST IN 1942; INFANT MORTALITY LOWEST

A record total of 124,000 births during 1942 in Michigan is coupled with an all-time low in deaths of infants under one year—an estimated rate of 36.18 per 1,000 live births—on the basis of reports for the first ten months compiled by the Michigan Department of Health.

The 1942 birth total represents a gain of 16,500 over the 1941 figure.

The state's infant mortality rate in 1900 was 159.08 per 1,000 live births.

EPIDEMIC KERATOCONJUNCTIVITIS NOW A REPORTABLE DISEASE

At a meeting of the State Council of Health, January 7, 1943, epidemic keratoconjunctivitis was designated as a reportable disease. This means that all cases or suspected cases shall be reported to the local health officer within 24 hours following diagnosis.

Keratoconjunctivitis is probably caused by a virus which is transmitted from person to person by direct or indirect contact. This disease, commonly called virus conjunctivitis, occurs in all ages and occupations but is more common in adults working in industry.

The condition in its early stages is difficult to diagnose and must be differentiated from all other types of acute conjunctivitis. The diagnostic criteria are:

1. Severe conjunctivitis.
2. Edema of the loose tissues.
3. Profuse tearing—frequently blood stained.
4. Preauricular and follicular lymphadenopathy.
5. Negative eye cultures and smears.
6. Late development of corneal opacities which do not stain with fluorescein.

The following recommendations are suggested to aid in the control of this disease:

1. Early recognition.
2. Isolation and exclusion from work of all infected individuals.
3. Instruction of patients about the communicability of the disease.
4. Careful communicable disease technique by physicians, nurses and first-aid workers in handling of all cases and suspected cases.
5. Immediate reporting to local health authorities.

BIRTH RECORDS

Requests for more than 115,000 copies of birth records which establish proof of citizenship were received by the Michigan Department of Health during 1942.

Errors made in reporting births occurring in Michigan to the Department cost taxpayers an estimated $15,000 last year. Correction of records is the full-time job of eight clerks. There is a tidy bill for paper, envelopes and postage.

NEW INDUSTRIAL HYGIENE DISTRICT OFFICES OPENED

District offices of the Department's Bureau of Industrial Hygiene have been opened in the Kalamazoo City-County Health Department, serving Kalamazoo, Van Buren, Berrien, Cass and St. Joseph counties, and in the Washtenaw County Health Department in Ann Arbor, serving Washtenaw, Jackson, Hillsdale and Lenawee counties.

BLOOD PLASMA RESERVES

Plasma reserves are now available in every civilian defense region for use in the event of casualties resulting from enemy action or sabotage.

The Regional Medical Officer will keep all Chiefs of EMS, hospitals, and Red Cross Disaster Relief Chairmen informed concerning the amount and distribution of plasma reserves available in the state and how localities may secure additional supplies in emergencies.

In cities where reserves are stored they may be obtained by hospitals through the local Chief of Emergency Medical Services. If a community is without plasma or if its supplies are depleted, the local Chief of EMS may obtain additional plasma in emergencies from the State Chief of EMS.

These instructions should not be construed to prevent the use of this plasma for life-saving purposes in any disaster. If OCD plasma is used in non-war related incidents, its use may be considered as a loan, and arrangements may be made later for its replacement.

DOCTOR ANDREWS RESIGNS

F. T. Andrews, M.D., resigned as director of the Bay County and Bay City Health Departments, effective February 1, 1943. Dr. Andrews has accepted a position in industrial surgery with the Fisher Body Division of the General Motors Corporation in Lansing.

WHO ARE THE MEN BEHIND THE "FACTS"

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* *Laryngoscope, Feb. 1935, Vol. XLV, No. 2, 149-154*
Laryngoscope, Jan. 1937, Vol. XLVII, No. 1, 58-60
Proc. Soc. Exp. Biol. and Med., 1934, 32, 241
N. Y. State Journ. Med., Vol. 35, 6-1-35, No. 11, 590-592.

MICHIGAN'S POSTGRADUATE INDUSTRIAL MEDICAL AND SURGICAL CONFERENCE

April 8, 1943

Rackham Memorial Building

Detroit

Sponsored by

The Michigan State Medical Society

In coöperation with

The Department of Postgraduate Medical Education, University of Michigan

Tentative Program

Morning

General Chairman: Kenneth E. Markuson, M.D., Lansing, Chairman, Committee on Industrial Health, Michigan State Medical Society

9:30 Address of Welcome

Presiding Chairman: H. H. Cummings, M.D., Ann Arbor, President, Michigan State Medical Society

9:40-10:10 "The Present Status of Medical Programs in War Industries."

10:10-10:40 "The Employment of Older Workers."

10:40-11:10 "The Employment of Women in Industry."

11:10-11:40 "Industrial Hygiene and the War Effort."

11:40-12:10 "Industrial Illness and Disability Analysis."

12:15-12:45 Luncheon—Rackham Memorial Dining Room

12:45- 2:00 Round Table Discussions

Rackham Memorial Conference Rooms

1. "Heart Diseases in Industry"
2. "Traumatic Eye Injuries and Infections"
3. "Dermatitis in Industry"
4. "Back Injuries—Medical-Legal Complications"
5. "Management of the More Common Industrial Fractures"

Afternoon

Presiding Chairman: Clarence D. Selby, M.D., Medical Consultant, General Motors Corporation, Detroit

1:45-2:15 "Industrial Dermatoses"

2:15-2:45 "Mental and Psychological Problems in Industry"

2:45-3:15 "Pathology and Surgical Management of Acute Head Injury"

3:15-3:25 Recess

3:30-4:00 "Surgical Repair of Traumatic Injuries of the Head"

4:00-4:30 "Management of Burns"

4:30-5:00 "Hematological Manifestations of Toxic Exposures in Industry"

6:30 Banquet—Rackham Memorial Building

ALL SPEAKERS WILL BE ANNOUNCED IN THE MARCH MSMS JOURNAL

Ferguson-Droste-Ferguson Sanitarium

✤

Ward S. Ferguson, M. D. **James C. Droste, M. D.** **Lynn A. Ferguson, M. D.**

✤

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"Doctor, my feet are always cold"



The patient who can't go to sleep without a hot water bottle, complains of "chilblains" and cramping calf muscles, and is subject to chronic ulcers, is likely to have an occlusive peripheral vascular disease, such as—

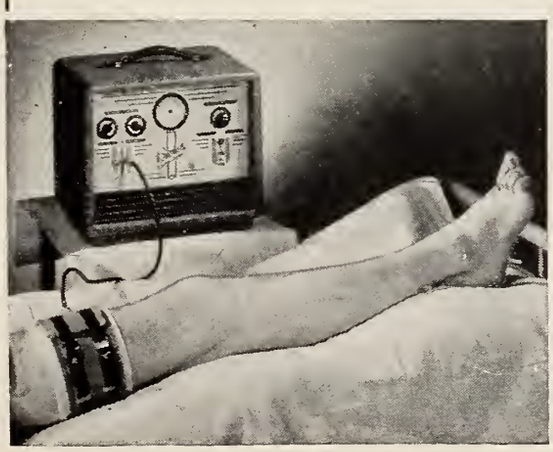
Peripheral vascular sclerosis
Early thromboangiitis obliterans
Acute vascular occlusion
Diabetic ulcers
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COUNTY AND PERSONAL ACTIVITIES

100 Per Cent Club for 1943

Barry County—H. S. Wedel, M.D., Secretary
Macomb County—D. Bruce Wiley, M.D., Secretary
Manistee County—C. L. Grant, M.D., Secretary
Ontonagon County—W. F. Strong, M.D., Secretary

The above county medical societies have certified 1943 dues for every member of their respective societies, to be the first 100 per cent paid-up counties for this year. Michigan State Medical Society dues for 1943 are $12.00.

A membership record was established in 1942 when the total number of Michigan State Medical Society members reached an all-time high of 4,714.

A tip to the people: Preserve your most valuable asset: *Health,* through American Medicine.

* * *

Carl Arksey, Lansing, is the artist who photographed the Michigan State Capitol, which appeared on the cover of the January number of THE JOURNAL.

"In the aged, the mouth becomes the nutritional barometer of health."—EDWARD L. TUOHY, M.D., JAMA, Jan. 2, 1943.

* * *

Wm. J. Burns, Executive Secretary of the Michigan State Medical Society, has been appointed a member of the Public Relations Committee of the State Bar of Michigan.

* * *

In Australia: Lieut. Walter G. Neeb, formerly of Detroit, writes from Australia: "Need I mention the pleasure each copy of the Michigan State Medical Society Journal brings to me in this isolated portion of Australia. Thanks much."

* * *

H. B. Elliott, M.D., Flint, has accepted a position in the Department of Surgery at the College of Physicians and Surgeons and Presbyterian Hospital of Columbia University, New York. He served as secretary for the Genesee County Medical Society and Hurley Hospital Staff.

* * *

Lt. Colonel Harold A. Furlong, M.C., U.S.A., resigned as Administrator of the Michigan Council of Defense and as State Medical Officer of the State Selective Service on December 30, 1942, after two years'

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service in Lansing. Colonel Furlong has been assigned to Carlisle Barracks, Carlisle, Pennsylvania.

Best wishes, Colonel Furlong, for success and satisfaction in your new work.

* * *

The Manistee County Medical Society sponsored three newspaper insertions of a "Notice to the Public" urging that the people coöperate with physicians in the matter of requests for home visits, office calls, and night calls, during the present emergency. Reprints of the newspaper announcements were distributed to members of the Society for circularization to patients. The response has been most favorable.

* * *

Clarence D. Selby, M.D., Detroit, was guest speaker at the Fifth Annual Conference on Industrial Health sponsored by the Council on Industrial Health of the AMA, Palmer House, Chicago, January 11-13, 1943. Dr. Selby spoke on "Procurement and Training of Professional Personnel for Industrial Health Service" and on "Why Do Employees Stay Away from Work and What Can We Do About It?"

* * *

MSMS 1943 Annual Session. The 1943 Postgraduate Conference on War Medicine—the 78th annual meeting of the State Society—will be held in Detroit at the Statler Hotel, September 22, 23, 24. Twenty-two (22) out-of-Michigan guest-essayists will be on the program.

During wartime a three-day refresher course of stellar quality, covering all phases of medical practice, must be welcomed by the busy and harassed practitioner. *Attendance should be a MUST!*

* * *

The Professional Liaison Committee, composed of three members each from the Michigan State Medical Society, the Michigan State Dental Society, and the Michigan State Pharmaceutical Association is as follows: A. F. Jennings, M.D., Detroit; W. H. Boughner, M.D., Algonac; E. L. Chapman, M.D., Detroit; E. J. Garlock, D.D.S., Lansing; C. J. Wright, D.D.S., Lansing; Fred J. Henry. D.D.S., Grand Rapids; Mr. A. J. Meyer, Detroit; Mr. Jack Webster, Detroit; Mr. Tracy Laubscher, Lansing.

* * *

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The Kellogg Company, Battle Creek, Michigan
A. Kuhlman & Company, Detroit, Michigan

The above ten firms were among the exhibitors at the 1942 MSMS annual meeting in Grand Rapids and helped make possible for your enjoyment one of the outstanding state medical meetings in the country. Remember your friends when you have need of equipment, medical supplies, appliances or services.

* * *

Voluntary Relocation. Any physician who is seeking opportunity and really is willing to be relocated for service, either in industry or in over-populated areas,

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The contents include sections on wine as a food and on the actions of wine on the gastro-intestinal system, the cardio-vascular system, the genito-urinary system, the nervous system and the muscles, and the respiratory system. The uses of wine in diabetes mellitus, in acute infectious diseases and in treatment of the aged and convalescent are also discussed. The value of wine as a vehicle for medication is dealt with, and an important section on the contraindications to the use of wine is included. An extensive bibliography is presented for those who may wish to pursue the subject further.

This review results from a study supported by the Wine Advisory Board, an agricultural industry administrative agency established under the California Marketing Act, and has been sponsored by the Society of Medical Friends of Wine.

Members of the medical profession are invited to write for this monograph. Requests should be made to the Wine Advisory Board, 85 Second Street, San Francisco.

and who has not been declared essential to his present locality, may send his name to the Michigan Consultant to the War Manpower Commission, P. R. Urmston, M.D., Davidson Building, Bay City (Telephone: Bay City 2-5421). This is necessary if the medical profession is to be able to solve its service problem adequately and promptly. It is desirable that better distribution of physicians be obtained on a *voluntary* basis. Doctors of Medicine over the age of 45 who wish to participate in the war effort and who are seeking good locations are invited to take advantage of this opportunity.

* * *

The Michigan Pathological Society held its annual meeting on December 12, 1942, at the Henry Ford Hospital, Detroit. The scientific program had been arranged in the form of a seminar with all members having microscopic slides and histories of the cases which were presented. The subject of the seminar was, "Lesions of the Small Intestine." Cases were presented by Drs. D. H. Kaump, F. W. Hartman, G. L. Bond, C. E. Black, J. G. Christopher, L. W. Walker, H. R. Prentice, and D. C. Beaver. The newly elected officers for 1943 are: President, H. R. Prentice, Kalamazoo; President-elect, D. C. Beaver, Detroit; Secretary-Treasurer, S. E. Gould, Eloise; Councillors: E. H. Norris, Detroit, and H. E. Cope, Lansing.

The next meeting, scheduled at the Grace Hospital, Detroit, on February 13, will be a symposium on "Lesions of the Skin."

* * *

Localities Urgently Needing Doctors of Medicine. According to incomplete returns from the Survey of Medical Service Available for Civilians, conducted through county medical society secretaries, the following localities need additional medical service. Physicians willing to be relocated are invited to investigate the opportunities in these cities and counties:

Augusta
Belding
Climax
Clinton County
Clio
Delton
Eaton Rapids
Ferndale area
Fulton
Gladwin County
Hillman
Homer
Iron County
Ludington
Mendon
Missaukee County
Monroe
Mount Morris
Muskegon
New Baltimore area
Royal Oak
Sault Ste. Marie, and Chippewa Co.
Schoolcraft
Swartz Creek
Tecumseh
Tekonsha
Vicksburg
Wexford County

* * *

Keep a Narcotic Record for Your Protection. All practitioners shall keep a daily record showing the kind and quantity of narcotics dispensed or administered, the name and address of each person to whom dispensed or administered, the name and address of the person upon whose authority and the purpose for which dispensed or administered, according to Article 177 of Federal Narcotic Regulations No. 5. No special record

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form for the use of practitioners is prescribed by the Federal Regulations.

This record, when balanced against the inventory submitted by the practitioner at the time of his latest registration, plus the total of subsequent purchases, and minus the stock on hand at any given time, affords a ready means of accounting for the practitioner's dispensing of narcotic drugs over the period. He can readily determine, for instance, whether there may have been a loss due to theft of part of his stock. In this connection, the practitioner is urged to exercise unusual care in safeguarding his stock of narcotic drugs as the drastic shortage of narcotics in illicit channels has resulted in attempts on the part of drug addicts and peddlers to pilfer supplies of the drug from the stocks of practitioners and druggists.

* * *

The MSMS Radio Committee is sponsoring an interesting series of medical broadcasts, in coöperation with the University of Michigan Extension Division and Radio Station WJR.

The medical series are broadcast on Wednesdays, 10:30 p.m., over Station WJR. The list of talks follows:

Nov. 11—Dr. Carl A. Moyer, Assistant Professor of Surgery, Topic: Physiological Problems Pertaining to the War.

Nov. 18—Dr. Maurice Seevers, Professor of Pharmacology and Chairman of that Department, Topic: The Sulfa Drugs.

Nov. 25—Dr. George Ramsey, Resident Lecturer in Epidemiology, Topic: Epidemics in Time of War.

Dec. 2—Miss Rhoda Reddig, Professor of Nursing and Director of School of Nursing, Topic: Nursing During the War.

Dec. 9—Dr. Howard H. Cummings, Director of Postgraduate Medicine, Topic: The Effect of the War upon Medical Service in Michigan.

Dec. 16—Dr. Ralph Pino, Editor, "Detroit Medical News," Topic: What Michigan Is Doing through Health Insurance for the Community.

Jan. 6—Dr. Raymond W. Waggoner, Professor of Psychiatry and Chairman of that Department, Topic: Psychiatric Problems of the War.

Jan. 13—Dr. Frank N. Wilson, Professor of Internal Medicine, Topic: Medical Research in South America.

Jan. 20—Dr. Harold Falls, Assistant Professor Ophthalmology, Topic: The Care of the Eyes of Children with Special Reference to Amblyopia.

Feb. 10—Dr. Henry Ransom, Associate Professor of Surgery, Topic: Until the Doctor Comes.

Feb. 17—Dr. Charles F. McKhann, Professor of Pediatrics and Communicable Diseases, and Chairman of that Department, Topic: War Babies.

Feb. 24—Dr. Frederick A. Coller, Professor of Surgery and Chairman of that Department, Topic: War Injuries, Treatment of Wounds, Cuts, Burns and Shock.

March 3—Captain Donald Leonard, Michigan State Police, Topic: Emergency Medical Service in Michigan.

March 10—Dr. Herman Riecker, Civilian Health in Michigan Defense Areas.

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IN MEMORIAM

DIED IN SERVICE

Lieutenant Stuart Terry of Pontiac was born October 5, 1907, in Owensboro, Kentucky, and was graduated from the University of Michigan Medical School in 1933. He interned at Harper Hospital and later was associated with the Michigan Mutual Hospital, Detroit. For a time he served as resident physician at Pontiac State Hospital and at St. Joseph's Mercy Hospital, Pontiac. In 1936, he went into private practice at Pontiac. Lieutenant Terry received his commission on June 17, and received his preliminary training at the Great Lakes Training Station and left for overseas last September. His death was caused by drowning in New Zealand on December 20, 1942.

Warren L. Babcock, of Detroit, was born March 14, 1873, in Eden, New York, and was graduated from the College of Physicians and Surgeons, Baltimore, Md. After serving as a surgeon at the Ogdensburg (New York) Hospital for the Insane and the Old Soldiers Home at Bath, N. Y., for several years, Dr. Babcock came to Detroit in 1904 as superintendent of the Grace Hospital. He resigned from his directorship at Grace Hospital in June, 1937, and accepted the position of treasurer of the board. He was past president and treasurer of the Michigan Hospital Association; past president of Wayne County Medical Society and past president of the Detroit Philatelic Society. He served overseas for two years in the First World War with the rank of colonel in charge of Base Hospital Number Six. He died in St. Petersburg, Florida, on December 27.

T. E. Camper of Owosso was born in 1897 and was graduated from the University of Pennsylvania in 1924. He began his practice in Delaware and also practiced in Maryland before his appointment as director of the Iron County Health Department in 1937. He remained in Iron River until the fall of 1940, when he was appointed health director of Owosso County. Before going to Owosso he took postgraduate work in public health at the University of Michigan, Ann Arbor. He died January 1, 1943.

Jean Vernier Radcliffe of Detroit was born in St. Clair County in 1874 and was graduated from the American Medical Missionary College at Chicago in 1900. She was an assistant professor of obstetrics and gynecology for five years at the college. In 1905 Dr. Radcliffe came to Detroit to enter private practice. She was an honorary member of the Wayne County Medical Society and an honorary life member of the Blackwell Medical Society. She died December 21, 1942.

Charles H. Rupprecht of Calumet was born in 1869 at Calumet and was graduated from the Michigan College of Medicine and Surgery, Detroit, in 1895. Dr. Rupprecht began his practice in Calumet where he remained until his death. He was known

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and highly esteemed throughout the Copper Country. He died December 8, 1942.

Robert Weirich of Marcellus was born in 1895 in Cincinnati, Ohio, and was graduated from Northwestern University Medical School in 1928. He interned in Wesley and Cook County hospitals, Chicago. He was on the staff at the State Hospital at Kalamazoo for a year following his graduation, and then went to Marcellus in 1930 where he established a general practice. Dr. Weirich served in the signal corps of the U. S. Army during World War I. He died December 25, 1942, in St. Luke's Hospital, Chicago.

THE DOCTOR'S LIBRARY

Acknowledgment of all books received will be made in this column and this will be deemed by us as a full compensation of those sending them. A selection will be made for review, as expedient.

NASAL MEDICATION. A Practical Guide. By Noah D. Fabricant, M.D., M.S., Associate in Laryngology, Rhinology and Otology, University of Illinois, College of Medicine. Baltimore: The Williams and Wilkins Company, 1942. Price, $2.50.

Dr. Fabricant has made a critical and very thorough analysis of Nasal Medications. First he reviews the anatomy of the nose and accessory sinuses, then an exhaustive study of physiology, including the action of drugs on the cilia, the mucous flow and the sinus linings and the pH concentrations with their meaning. The pathological physiology of nasal diseases is presented. With this background the uses and actions of the whole nasal medicinal armamentarium is given and discussed, giving reasons for favoring certain procedures and discarding others. Authorities are quoted and profuse references given. A few well-chosen illustrations are given. The book is not too big; is well written and an easy and handy reference.

ADVANCES IN INTERNAL MEDICINE. Editor, J. Murray Steele, M.D., Welfare Hospital, New York University Division, Welfare Island, N. Y. Associate editors, William Dock, M.D., Department of Pathology, Cornell University Medical College, New York, N. Y.; Tinsley R. Harrison, M.D., Bowman Gray School of Medicine, Wake Forest College, Winston-Salem, N. C.; Chester S. Keefer, M.D., Evans Memorial, Massachusetts Memorial Hospitals, Boston, Mass.; Robert F. Loeb, M.D., College of Physicians and Surgeons, Columbia University, New York, N. Y.; Warfield T. Longcope, M.D., The Johns Hopkins Hospital, Baltimore, Md., George R. Minot, M.D., Thorndike Memorial Laboratory, Boston City Hospital, Boston, Mass.; I. Snapper, M.D., Peiping Union Medical College, Peiping, China. Volume 1. New York: Interscience Publishers, Inc., 1942. Price, $4.50.

This is a collection of rather complete monographs on various advances in medical science and practice. These are prepared by individuals who have contributed in such advance, well done, and in not too technical language. This volume discusses the use of the Miller-Abbott tube in treatment and diagnosis of gastro-intestinal disorders by W. Osler Abbott; insulin and protamine insulin in treatment of diabetes by Paul H. Lavietes; sympathetic nervous control of the peripheral vascular system by Robert W. Wilkins; antibacterial action of the sulfonamide drugs, by Colin M. McLeod; choice of sulfonamides in the treatment of infection by Chester S. Keefer; infections of the urinary tract by Lowell A.



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OBSTETRICS—Two Weeks' Intensive Course starting April 19; Informal Course.
OPHTHALMOLOGY—Two Weeks' Intensive Course starting April 5.
OTOLARYNGOLOGY—Two Weeks' Intensive Course starting April 19.
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Rantz; hypertension: a review of humoral pathogenesis and clinical treatment by Irvine H. Page and A. C. Corcoran, and several other reviews of equal interest. This is the first volume of a series which will be decidedly valuable.

MEDICAL PARASITOLOGY. By James T. Culbertson, Assistant Professor of Bacteriology, College of Physicians and Surgeons, Columbia University. Pages xvi and 285. New York: Morningside Heights, Columbia University Press, 1942. Price, $4.25.

All parasitic animals which have an influence on health, and which live upon or invade the human body are described, mostly pictured, and their life, modes of propagation and prevention of invasion clearly and interestingly given. The book makes one familiar with the animal, whether it is a single cell or a complicated organism. Methods of diagnosis and treatment, as well as steps to prevent infection, are freely and completely described. The book is a handy reference for the practitioner and a good textbook for the student. It is finely printed and bound, and would be an acceptable addition to any medical library.

THE ANSWER IS—YOUR NERVES. By Arnold S. Jackson, M.D., F.A.C.S., with a chapter by the Rev. Edwin O. Kennedy. Illustrations by Evelyn Lipman. Madison, Wisconsin: Kilgore Printing Co., 1942. Price $2.00.

Why be secretary of your luncheon club when you do not want to be? Maybe you are nervous because you are not only working under high tension, but are subjected to continuous interruptions. This modern life is so fast, but the man living it can restrain himself, and live longer. If the pace is killing, relax. There are patients complaining of tight necks or shortness of breath. Some want operations and some have a fear of operations. Dr. Jackson gives us a very readable book, not technical in words, but sensible in ideas. It can be given to our "nervous" patient and can be understood by him, with a little insight on the part of the doctor in selecting his patients. It is stated that one out of every fifteen persons in the state of New York spends seven years in a hospital for nervous diseases. A little foresight and a little careful guidance can relieve many of these. The relation of religion and nerves is discussed, and the increasing sympathy between the two professions.

NUTRITION AND CHEMICAL GROWTH IN CHILDHOOD. Volume I. Evaluation. Icie G. Macy, Ph.D., Director of the Research Laboratory of the Children's Fund of Michigan, Consultant for nutrition to the pediatric staff of the Children's Hospital of Michigan. Former Secretary of the American Institute of Nutrition. With a foreword by Hugo A. Freund, M.D., President, Board of Trustees, Children's Fund of Michigan. Springfield, Illinois: Charles C. Thomas, 1942. Price, $5.00.

This is volume one of an exhaustive study of the chemistry and other biological facts in growth and development of childhood. The opportunity for study was used to accumulate a tremendous mass of facts and information, which is presented in great detail. Children were placed in homes and schools where their every action could be recorded. Intake and excreta of foods, chemicals, metals, were studied to determine

influence on growth. Blood determinations, and the study of white and red cell variance at different hours of the day and night, and under conditions of rest or emotion—all this was done to determine influence on the studies being made. Thousands of studies, experiments and investigations were made, and they are classified, tabulated and made available in this book. If any line of enquiry into child growth, nutrition, diet, and effects of rest or recreation was missed it would be a surprise. The book is complete and factual, the studies varied. Methods are described, and when needed, are invented. They are given in sufficient detail to be a guide for others to follow. Years were required for this study by a corps of trained laboratory workers, and the results are of extreme value.

SULFANILAMIDE AND RELATED COMPOUNDS IN GENERAL PRACTICE. By Wesley W. Spink, M.D., F.A.C.P., Associate professor of medicine, University of Minnesota Medical School. Chicago: The Year Book Publishers, Inc., 1942. Price $3.00.

The sulfonamides and their use in treatment have come so rapidly, and have filled our literature so thoroughly that it is impossible for the average doctor to keep abreast of this branch of therapy. A book to have gone into a revised and rewritten second edition in just two years must have some decided merit. General principles of the drug and its use are given, together with its chemical structure, and the variations making up the other sulfonamide compounds. Doses, methods of treatment, indications, selection of the sulfonamide to use are carefully and completely covered in the text, covering over three hundred pages. There is a fifty-five page section on bibliography. Treatment for venereal infections is carefully given, and reasons for some failures. Dr. Spink does not claim twenty-four-hour cures, but does tell of very successful prophylactic use in 800 cases with only one failure. The book is a systematic and easily accessible treatise on sulfonamide therapy, and brings this latest advance of medicine into our easy reach.

A TEXTBOOK OF GYNECOLOGY. By Arthur Hale Curtis, M.D., Professor and Chairman of the Department of Obstetrics and Gynecology, Northwestern University Medical School; Chief of the Gynecological Service, Passavant Memorial Hospital, Chicago. Fourth Edition. Reset with 401 illustrations, Chiefly by Tom Jones. Philadelphia and London: W. B. Saunders Company, 1942. Price $8.00.

This new, enlarged fourth edition of Doctor Curtis' textbook, first published in 1930, is one of the most comprehensive single volumes on this subject. Many valuable illustrations of pelvic anatomy and pathology are found among its 690 pages.

Important addition to this edition include further anatomical plates and descriptions, an evaluation of sulfonamide therapy in infections, and a review of modern endocrine therapy in gynecological conditions requiring supportive or replacement therapy. New endocrine products, synthetic drugs are evaluated, and familiar preparations reviewed.

The pathology and management of uterine tumors and carcinoma of the cervix in particular has been enlarged upon, with an excellent demonstration of radical hysterectomy for malignancy. The revised section on ovarian tumors is the most important addition to this volume. This is a valuable book.

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SUBJECTS

The Diagnostic Significance of Pain. Panel Discussion.
Recent Advances in Obstetrics.
Recent Advances in Immunization Procedures.
Newer Concepts in the Diagnosis and Management of Diseases of the Liver. Clinical Dialogue.
The Differential Diagnosis and Management of Hypertension.
The Indications for and the Use of Plasma in Transfusions.

An Intramural Course in Roentgenology will be held at the University of Michigan Medical School, Ann Arbor, from April 12 to 16, inclusive. A complete announcement of all Intramural Courses will be published in the April Michigan State Medical Society Journal. For further information, write the

Committee on Postgraduate Medical Education
Room 2040, University Hospital
Ann Arbor, Michigan

INFORMATIVE COUNTY SECRETARIES' CONFERENCE

The annual County Secretaries' Conference, sponsored by the Michigan State Medical Society and held at the Olds Hotel, Lansing, on January 24, proved to be a variegated and instructive meeting. Eighty-eight registered for the Conference, including thirty-two county society secretaries. D. C. Bloemendall, M.D., of Zeeland presided and introduced M. E. Lapham, M.D., Executive Officer, Procurement and Assignment Service, Washington, D. C., who outlined "How the Medical Professon Can Meet Military, Industrial, Research and Civilian Needs During Wartime." The other guest speakers were Edward T. Broadwell, Rationing Director, OPA, Detroit, who spoke on "The Rationing Program as It Affects Physicians"; Captain Harold Mulbar, Michigan State Police, East Lansing, who answered the question: "Are There Any Spies in Michigan?"; J. W. Holloway, Jr., Director of the Bureau of Legal Medicine and Legislation of the A.M.A., Chicago, who outlined the "New Federal Income and Victory Tax Law"; Harold R. Gordon, Executive Secretary, Health & Accident Underwriters' Conference, Chicago, who presented "Your Disability Insurance Dollar—How to make the Most of It"; J. Earl McIntyre, M.D., Secretary, Michigan State Board of Registration in Medicine, Lansing, who explained "Temporary Licenses and Dislocating of Physicians"; L. Fernald Foster, M.D., Secretary of the Michigan State Medical Society, Bay City, who outlined "Facts for the Physician"; and Granville A. Bennett, M.D., Office of Civilian Defense, Washington, D. C., who spoke on "Poison Gas Warfare."

A spirited question and answer period followed the morning and the afternoon presentations.

An interesting exhibit on "Health Education in the Doctor's Office" was presented by the American Medical Association with Thomas G. Hull, Director of Scientific Exhibits of the A.M.A., in personal charge.

C. L. Grant, M.D., of Manistee, Secretary of the Manistee County Medical Society, was elected chairman for the ensuing year.

W. S. Jones, M.D., of Menominee, Secretary of the Menominee County Medical Society, was successful in winning the door prize, donated by Bill Mennen.

County Secretaries present at the Conference were Doctors E. B. Anderson of Dickinson-Iron Medical Society; Paul H. Bassow of Washtenaw; E. W. Blanchard of Sanilac; D. C. Bloemendaal of Ottawa; C. G. Clippert of North Central Counties; Frank Doran of Kent; Ray M. Duffy of Livingston; F. Mansel Dunn of Ingham; R. J. Fortner of St. Joseph; L. Fernald Foster

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of Bay; Sidney Franklin of Luce; Harold H. Gay of Midland; Roy R. Gettel of Huron; C. G. Grant of Manistee; I. W. Greene of Shiawassee; T. Y. Ho of Clinton; Benton Holm of Wexford; W. O. Jennings of Kalamazoo; E. B. Johnson of Allegan; W. S. Jones of Menominee; R. Bruce MacDuff of Genesee; John A. MacNeal of Hillsdale; L. C. Manni of Calhoun; John J. McCann of Ionia-Montcalm; Charles Paukstis of Mason; Horace W. Porter of Jackson; G. B. Saltonstall of Northern Michigan; Lester G. Sevener of Eaton; R. W. Spalding of Van Buren; H. S. Webel of Barry; J. A. White of Mecosta-Osceola-Lake; and D. Bruce Wiley of Macomb; also Executive Secretaries: Sara Burgess of Genesee County and Mr. J. A. Bechtel, Wayne County.

Officers of the Michigan State Medical Society in attendance were: Chairman A. S. Brunk, M.D.; Secretary L. Fernald Foster, M.D.; Speaker P. L. Ledwidge, M.D.; Councilors Wilfrid Haughey, M.D.; V. M. Moore, M.D.; W. E. Barstow, M.D.; O. D. Stryker, M.D.; R. C. Perkins, M.D.; and Executive Secretary Wm. J. Burns.

Guests at the Conference included W. H. Barnum, M.D., Fremont; J. B. Barnwell, M.D., Ann Arbor; Henry Cook, M.D., Flint; Carleton Dean, M.D., Lansing; Richard H. Freyberg, M.D., Ann Arbor; A. B. Gwinn, M.D., Hastings; B. C. Hall, M.D., Pompeii; J. Bates Henderson, M.D., Sebewaing; Fred M. Huntley, M.D., Lansing; F. E. Luton, M.D., St. Johns; Kenneth E. Markuson, M.D., Lansing; Harold A. Miller, M.D., Lansing; Major C. I. Owen, M.C., Lansing; Chas. B. Pillsbury, M.D., Ypsilanti; Fred R. Reed, M.D., Three Rivers; Le Moyne Snyder, M.D., Lansing; C. A. Stimson, M.D., Eaton Rapids; E. V. Thiehoff, M.D., Lansing; R. G. Toneroy, M.D., Eaton Rapids; P. R. Urmston, M.D., Bay City.

Other guests at the Sunday meeting included: Thomas G. Hull of the A.M.A., Chicago; Walter M. Berry, Minard Farley, Jr., H. Earle Correvont, Geo. H. Fern, and Jacob Klassen, all of Lansing; Philip Platt, New York City; Captain L. A. Potter, Allen Shoenfeld, and John Wickstrom, all of Lansing; Geo. H. Wood, M.D., Detroit; State Representatives Dora H. Stockman, George Harma, Victor Knox and Mrs. Knox, Miles M. Callaghan and Mrs. Callaghan, and Stanley Elder.

* * *

SOCIAL SECURITY EXPANSION

The Michigan State Medical Society House of Delegates at its meeting of September 21-22, 1942, unanimously adopted the following resolution opposing any proposal for compulsory insurance of hospitalization and medical services:

WHEREAS, it has been reported that the Social Security Board intends to recommend to The Congress that the Social Security Act be amended to provide hospitalization benefits, in service or in cash, to all insured under the Social Security Act and to provide for additional payroll deductions for the purpose of financing such benefits, and

WHEREAS, this proposed expansion of the Social Security System must be considered as a part of a movement toward complete plans for compulsory sickness insurance and the socialization of all professions and businesses, which principle has been consistently opposed by the medical profession of Michigan for the reason that it would lead inevitably to a lowering of the standards of medical care; therefore, be it

RESOLVED, that the Michigan State Medical Society in session September 21-22, 1942, go on record as being unalterably opposed to any proposal for compulsory insurance of hospitalization or medical services.

* * *

ASSOCIATION OF DOCTORS OF MEDICINE AND CULTISTS

Statement of Policy Adopted by the House of Delegates of the American Medical Association in June, 1938; and by the House of Delegates of the Michigan State Medical Society September, 1938.

Many inquiries concerning the relations of the various cults to the regular profession have been received. The inquiries pertain particularly to the osteopath and the optometrist. Some of our members are giving lectures in osteopathic and optometric schools and addresses before their societies. Some members are associated by a common waiting room in offices with them. Some members are by mutual agreement professional associates principally in the field of surgery. There are some instances of partnership in practice. All of these voluntarily associated activities are unethical. Such relations certainly do not "uphold the dignity and honor of (our) profession" or "exalt its standards." In case of emergency no doctor should refuse a sufferer knowledge or skill which he possesses to the sufferer's harm but this is quite a different matter from that of a consultant or practitioner who by consulting or practicing with him assists a cultist to establish himself as competent and on the same basis of medical knowledge as a doctor of each, a consultation with a cultist is a futile gesture if the cultist is assumed to have the same high grade of knowledge, training and experience as is possessed by the doctor of medicine. Such consultation lowers the honor and dignity of the profession in the same degree to which it elevates the honor and dignity of the irregular in training and practice. Practicing as a partner or otherwise has the same effect and objection. Teaching in cultist schools and addressing cultist societies is even more reprehensible for such activities give public approval by the medical profession to a system of healing known to the profession to be substandard, incorrect and harmful to the people because of its deficiencies. There hardly can be a voluntary relationship between a doctor of medicine and a cultist, which is ethical in character.



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Pyogenic Infections of the Skin Especially Hydradenitis Suppurativa*

By Louis A. Brunsting, M.D.
Rochester, Minnesota



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Consultant in Dermatology and Syphilology, The Mayo Clinic and Associate Professor in Dermatology and Syphilology The Mayo Foundation, University of Minnesota Graduate School at Rochester, Minnesota. Born July 7, 1900, at Grand Rapids, Michigan; attended John Calvin College and Grand Rapids Junior College; M.D. in 1924, University of Michigan; intern of Bodgett Memorial Hospital, Grand Rapids, and practiced in Nashville, Michigan, for nine months. Entered the Mayo Foundation as a Fellow in Dermatology and Syphilology, April 1, 1926, and received the degree of M.S. in Dermatology and Syphilology in 1929 from the University of Minnesota. Member of American Dermatological Association, American Academy of Dermatology, Society for Investigative Dermatology, Minnesota and Chicago Dermatological Societies.

In the study of pyogenic disorders of the skin there has been, in general, too much emphasis on the invading organisms and too little on the host or on the qualities that make up a favorable soil. This paper emphasizes a not uncommon form of pyoderma known as hydradenitis suppuration which is characterized by chronic and recurrent burrowing abscesses and sinuses of the apocrine gland-bearing zones of the body, the axillæ, inguinal folds, genitalia, perineum, perianal regions and, in obese females, the lower half of the dependent breasts. Treatment must be individualized to include measures of general hygiene, the use of sulfonamide drugs, roentgen therapy and often surgical excision and grafting of the sites.

Pyogenic infections comprise the commoner disorders of the skin. Most of them are so mild that they never come to the attention of the physician; others lead to systemic complications of the severest degree. A variety of micro-organisms may be cultured from the surface of the normal skin but pathogenic staphylococci and streptococci are rare, probably appearing as transient invaders. The intact skin resists the penetration of pathogenic micro-organisms although a weak point is the follicular orifice. Pyogenic infections develop through a break in the continuity of the surface of the skin, as follicular invasions, as secondary complications of insect bites, excoriations or other trauma, or as a complication of pre-existing dermatoses.

Different persons possess varying degrees of susceptibility to pyogenic infections of the skin but the reason for this is difficult to explain. Climatic influences are apparent; for example, the warmth and humidity of the summer favor the appearance of impetigo contagiosa, especially in the delicate skin of children. Sunlight and tanning, on the other hand, tend to clear the skin of superficial infections. The influence of diet is debatable. There is evidence to show that the ingestion of carbohydrates in excessive amounts retards the self-sterilization of the skin[2, 3] and that experimental infections in animals are rendered more severe.[6, 7] The apparent susceptibility of diabetic patients to furuncles and carbuncles has been explained on the basis of faulty carbohydrate metabolism. A current explanation[8] for the cause of acne vulgaris is based on faulty metabolism of fats wherein the skin is flooded with an excess of lipoids which favors the development of comedones and pustules.

Certain occupations predispose to pyogenic infections of the skin. Folliculitis and acne occur among those who work in oils and pitch; dermatitis with secondary infection and paronychia is commonly seen among sugar workers and confectioners; paronychia of the fingers is a frequent complication of the maceration which occurs after prolonged immersion in soapy water, as with housewives and dishwashers.

*From the Section on Dermatology, Mayo Clinic.
Read before the Seventy-seventh Annual Meeting of the Michigan State Medical Society, Grand Rapids, Michigan, September 25, 1942.

During the past several years there has been a stimulation of treatment of pyogenic diseases of the skin, particularly with the advent of the sulfonamide compounds. These drugs can be used topically or systemically and their practical applications will be discussed.

Superficial Infections

Impetigo contagiosa is most frequently seen in the summer months. It occurs chiefly among children on the exposed surfaces of the face and hands. Both streptococcic and staphylococcic varieties have been described. As a rule, the treatment is not difficult except among infants and the newborn in hospitals. The old standby is ammoniated mercury ointment but this possesses sensitizing properties. Solutions of silver nitrate or gentian violet are effective but these produce unsightly staining of the skin and linen. The most effective application, after the crusts have been removed, is a preparation of 5 per cent sulfathiazole in an emulsion base. The hands should be scrubbed vigorously; the nails should be kept trimmed and anointed with the same preparation.

A *furuncle* is an acute, tender staphylococcic abscess localized about a hair follicle. The sites most commonly involved are the face, back of the neck, axillæ and buttocks. Spread occurs by auto-inoculation through the broken skin or an adjacent hair follicle. In most cases there is no systemic cause. A crop of furuncles may develop from a single lesion as a result of poor hygiene or trauma, such as follows the removal of adhesive tape which was applied to the dressing of the original lesion. No one has explained satisfactorily the tendency among some persons for crops of furuncles to develop in the spring and fall. Sometimes diabetes or malnutrition underlies recurrent furunculosis but the importance of these factors has been exaggerated. However, in this connection it may be well to emphasize that when a crop of furuncles or a carbuncle appears suddenly on a person who is known to be diabetic, it usually means that the diabetes is poorly controlled and that more serious complications may occur unless the general situation is promptly appraised and corrected. In the case of crops of furuncles or a carbuncle the administration of sulfathiazole by mouth in suitable doses for several days tends to reduce the severity of the infection. In treating those who have a tendency to recurrent furunculosis it is well to insist on frequent baths with soap and water and to secure a tan by exposure to natural sun or to artificial irradiation. Once weekly a sulfur bath is beneficial.

Sulfur precipitated (finely pulverized)	500.00 gm.
Sodium hyposulfite	120.00 gm.
Acid sulfuric, diluted	250.00 c.c.
Distilled water, in sufficient quantity to make	4,000.00 c.c.

Directions: 500 c.c. (1 pint) to each bath.

The management of *erysipelas* will not be discussed. In this connection, however, it may be well to mention a *recurrent form of lymphangitis or cellulitis* of the legs which occurs chiefly in men and is considered to be a consequence of fungous infections of the feet. There may be a brisk febrile reaction and other systemic symptoms with each attack. Unless the source of infection is recognized and eliminated, the recurrent bouts may lead to chronic lymphedema of one extremity or both. Often fungi can be demonstrated from the fissures and vesicles which are present between the toes or on the soles and chronic involvement of the nails should not be overlooked. The primary need is to treat the fungous infection of the feet. For the acute febrile episode the administration of sulfathiazole by mouth is beneficial.

Dermatitis repens is a burrowing infection of the upper layers of the skin which usually affects the hands or the feet as a secondary complication of trauma or previous eczema. The disease spreads slowly and there are no constitutional symptoms. Effective treatment requires that the pockets of pus be denuded of their epidermal coverings by means of antiseptic wet dressings and then the application of sulfathiazole ointment is distinctly helpful.

Systemic Infections

Streptococci and staphylococci, singly or in combination, may involve the deeper tissues of the skin to produce ulcerative lesions which may be serious and disabling. Such are *hemolytic streptococcic gangrene, progressive postoperative gangrene and chronic streptococcic ulcer of the skin.* In such cases bacteriologic studies must be made promptly to detect the nature of the invading organism and treatment must be heroic. Sulfathiazole and sulfanilamide in powder form locally and by oral administration, zinc peroxide

paste applied to the undermining portions of the lesions, cautery, excision well beyond the advancing margins and repeated blood transfusions may all be called into use.

Pyoderma gangraenosum appears chiefly as a complication among persons who are debilitated by systemic diseases such as chronic ulcerative colitis. Lesions may be single or multiple, appearing first as small furuncles or abscesses precipitated by trauma and progressing with surprising rapidity to form large ulcerations with liquefied, undermined borders. The treatment is systemic. As a rule, the lesions appear in connection with an exacerbation of the underlying debilitating disease and they fade and heal when there is improvement of the general health.

Special attention will now be given to a fairly common, deep seated pyogenic infection of the skin which is classified as *hidradenitis suppurativa.* Adults are affected chiefly and lesions most commonly occur in the region of the axillæ. There may be involvement in one site only or the disease may be widespread to involve the groin, perineum, genitals, the region around the anus, buttocks, and in obese women, the skin of the lower half of the dependent breasts. The disease is much more common than is generally appreciated;[1] it has become obscured under such names as recurrent abscesses or furuncles of the axillæ or buttocks, pyoderma, dissecting cellulitis, chronic undermining burrowing ulcers of the skin, nonspecific granuloma and even scrofuloderma.

As a rule, the disease affects robust persons who are rather well nourished, often having an oily skin and evidence of chronic, deep seated acne in the form of multiple comedones, cystic abscesses and pitted scars of the face or trunk. In some cases there is involvement of the scalp and the back of the neck at the hairline in the form of a low grade infectious process which burrows from place to place as a dissecting cellulitis; it has been described as such or as perifolliculitis abscedens et suffodiens (Fig. 1). The essential lesion in hidradenitis suppurativa is a deep seated follicular furuncle which usually appears first in the axilla but may occur in the other sites mentioned (Fig. 2). This may subside or there may be a crop of lesions in the vicinity and by slow undermining there are produced soft, elevated abscesses and, sooner or later, thickened bands or cords of scar tissue. In the early stages one or more of the individual abscesses may rupture and undergo spontaneous involution. In



Fig. 1. Extensive pyoderma of the scalp (dissecting cellulitis), later treated by cautery excision. There was also involvement of the axillæ.

the more protracted cases suppuration extends into the deeper layers of the subcutaneous tissue with the formation of extensive sinus tracts and ulceration. Remissions and relapses are common and healing may be delayed for months or years. The open wounds are indolent, discharging thick creamy pus, and there may be occasional recurrent bouts of regional erysipelas. Staphylococcus aureus, green producing streptococci and hemolytic streptococci are the usual invaders. In the region of the anus the condition is sometimes confused with pilonidal sinus or fistula in ano, but penetration to the rectum occurs rarely.

There is an interesting explanation for the predilection of the disease for certain regions of the body. Microscopic examination of early lesions reveals an inflammatory reaction which involves certain sudoriferous structures known as apocrine glands. These must be distinguished from the eccrine, or common type of sweat gland. Apocrine glands are essentially adult structures, activated at the time of puberty and dis-

tributed over particular zones of the body, the axillæ, nipples and the perianal and genital regions. They are said to be more abundant in some races than in others and more active in some individuals than in others of the same race. The apocrine apparatus operates in lower forms as the scent organ of sexual function, of which the vestigial remnant persists in man. The apocrine glands are not secretory; instead there is extruded a cheesy, odoriferous material formed by degeneration of the contents of the cells of the glands proper. Plugging of the ducts and subsequent infection of the accumulated material produce the abscesses and the burrowing of the skin in the selected regions of the body so characteristic of this particular disease entity. In some cases overactivity of the sebaceous glands with resulting deep seated acne seems to be a part of the same process.



Fig. 2. Comedones, follicular abscesses and scars of the lower half of the breasts. Similar lesions involved the inner part of the thighs and the buttocks. There was a draining abscess of the left groin.



Fig. 3 (*a*) Shows chains of abscesses in the right inguinal fold and draining sinuses of the right thigh. There was healed hidradenitis of the right axilla and extensive scarring of acne conglobata on the face and trunk. (*b*) Appearance of site in another case ten days after cautery excision of lesions near the genitalia. There was also hidradenitis of both axillæ, healed dissecting cellulitis of the nuchal region and extensive acne vulgaris.

Treatment

In general, the treatment depends on the extent of the disease and its location. In the early stages conservative measures such as heat, roentgen therapy or surgical evacuation of the infected process may suffice. In cases of long standing, best results are obtained by a combination of surgical treatment, the use of roentgen rays, the administration of the sulfonamide compounds such as sulfathiazole or sulfadiazine, and other measures that are supportive to the general health.

Roentgen therapy is a valuable adjunct to the treatment of hidradenitis. In the early stage, relatively small doses must be used, as is the case

in any acute inflammatory process. It has been our custom to use approximately 50 to 75 r, which does not respond to adequate primary conservative treatment. Surgical measures should



Fig. 4 (*a*) Involvement of the right axilla of five years' duration showing burrowing abscesses, sinuses and cordlike bands. Similar involvement in left axilla and in the region of scrotum and anus was present. (*b*) Same site as *a* twenty days after excision and skin grafting; complete healing followed. The other axilla was treated similarly.

generated at 130 kilovolts (constant potential) and filtered through 4 mm. of aluminum. This treatment is usually repeated every third day until four or five such treatments have been given or until the lesion has become quiescent. An interval of probably three weeks should elapse before further treatment in larger doses is given. In the chronic phase of hidradenitis, doses of approximately 200 to 250 r are given at intervals of approximately three weeks until the lesion has become quiescent. If, after an average of four such treatments, no improvement has taken place, roentgen therapy should be discarded as the method of choice. The use of doses as suggested does not contra-indicate the application of hot compresses and other therapeutic agents in the interval between treatments.

Roentgen therapy will in itself at times produce a satisfactory result but fairly commonly surgical dissection eventually become necessary. The abscesses and the burrowing sinuses must be unroofed. Usually the overlying skin is thin, and friable. If the infected material is eliminated, healing by granulation occurs uneventfully. In some instances it is necessary to destroy the lesion with actual cautery, the patient being under general anesthesia (Fig. 3 *a* and *b*).

Special attention should be called to the group of cases in which there is infection in the axillæ



Fig. 5. Another example of grafting, one year after operation. In this instance both axillæ and the buttocks were involved.

not be delayed too long as there seemingly is a vulnerability to infection of other apocrine gland-bearing sites. Also it may be pointed out that

after surgical excision of one infected site, there is often a favorable response in other infected regions. Preferably the excision should include all the hair-bearing areas of skin and should be carried out by dissection to obtain any infected pockets in the deeper fat and connective tissue as well. After completion of the excision a split skin graft is sutured into position (Fig. 4 *a* and *b*). Powdered sulfanilamide or sulfathiazole is dusted over the site and a moist bandage with sponge pressure is applied and maintained for a period of several days. After conservative treatment this combination of surgical excision and grafting has given excellent results with a minimum degree of deformity[4,5] (Fig. 5). When many sites are involved, including the axillæ and the posterior folds of the anus, perineum and groin, the general health may be depleted; secondary anemia may be present. The diet should be adequate and should be fortified with supplementary vitamins; sulfur baths are useful cleansing measures and heliotherapy is helpful; sulfathiazole or sulfadiazine is administered by mouth in repeated courses according to tolerance; roentgen therapy is applied to the more active zones of infection; nonspecific measures, including injections of foreign protein or of neoarsphenamine for their tonic effect, may be considered in order to stimulate the general resistance of the patient.

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Modern Management of Infections in the Urinary Tract*

By Russell D. Herrold, M.D.
Chicago, Illinois



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A discussion will be given of sulfathiazole and sulfadiazine in the treatment of gonococcic infections, including optimum dosage, toxic manifestations, and problems connected with failures. Steps in the determination of cure are outlined. Important phases of the diagnosis and treatment of nonspecific prostatitis are summarized. The indications and contra-indications for chemotherapy in infections of the bladder and upper urinary tract are reviewed. The administration of the sulfonamides for the prevention of instrumental reactions is emphasized. Lantern slides will be presented summarizing the important points in the various subdivisions of the subject.

■ Progress seems to have leveled off as regards sulfonamide therapy of infections in the urinary tract. It can now be said that sulfathiazole and sulfadiazine are the drugs of choice for gonococcic infections and, with few exceptions, also for the so-called nonspecific infections. In my experience these two drugs have proved equally efficacious. The preference for sulfadiazine rests largely with the lower incidence of toxic reactions, particularly of the minor type. Sulfathiazole has in its favor a lower cost to the patient. So far as I know there are no improved sulfonamide derivatives in the investigative stage. The immediate future is not likely to see a release of the newer types of antiseptics from bacterial origin, such as gramicidin and pencillin, although it is entirely possible that in the future the sulfonamides will be replaced by new and as yet undeveloped antibacterial agents.

Gonococcic Infections

During the past two and one-half years, in association with Dr. John Henry in the Clinic of the Social Hygiene League, we have observed more than one thousand patients with gonococcal

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infections to whom sulfathiazole or sulfadiazine has been administered. The results seem clear that a schedule of 2 grams daily for ten days is inferior to the same total amount given on the basis of 4 grams daily for five days, which is now more generally accepted as the standard course. We are not so sure that the five-day course is superior to another scheme of administration which attains the same total amount of the drug. In the new schedule sulfathiazole or sulfadiazine is given in a dosage of 4 grams for three days and then 2 grams daily for four days. The latter schedule has been in operation for over six months, but it is too soon for conclusions, except to state that so far our comparison indicates that fewer positive cultures have been obtained following the seven-day course as compared to the five-day course. This observation has been particularly striking in women. In any case the optimum results would seem to require reasonably high dosage during the first two to four days of therapy, after which reduction of sulfathiazole or sulfadiazine favors fewer toxic manifestations without lowering the cure-rate to any significant per cent.

Toxic Manifestations

The earlier claims for a decreased incidence of the more dangerous toxic manifestations from sulfadiazine as compared to sulfathiazole is not being substantiated by further clinical observations. It is becoming increasingly more evident that there must be equally careful appraisals during the administration of both drugs. Close cooperation of the patients is desirable and detailed instructions ought to be given for discontinuance of the drug upon the appearance of certain reactions. This is especially important where patients are not under constant supervision as in ambulatory practice. It is my opinion that in the interest of safety, patients should not be given the one-course quota of 20 grams of the drug for self-administration, together with instructions to return in a week, while during the interim there is no medical supervision. This policy has been advised at some clinics and it is likely to lead to unnecessary serious reactions.

With both sulfathiazole and sulfadiazine the extremely important precaution concerns possible damage to the urinary tract itself, during the short period usually required for a successful response. Therefore, in practice a careful check on the urine and the urinary symptoms is diligently and frequently required. It is very necessary that the urinary output at all times exceed 1500 c.c. for each twenty-four hours. Whenever possible, a microscopic examination should be made for blood cells and excessive precipitation of crystals. Casts should be looked for and the usual tests made for albumin. The urine should, of course, be inspected grossly for blood. We also have noted that excessive crystals frequently give a muddy appearance to the urine on gross examination, as was recently emphasized by Arnett.

Drug fever and skin eruptions are more prone to appear after the sixth or seventh day of therapy. Blood dyscrasias, such as agranulocytosis, occur more often after the tenth or twelfth day of therapy, where such duration of the drug is neither indicated nor advisable for the majority of infections of the urinary tract. Acute hemolytic anemia may occur early as well as toxic hepatitis. In several instances the high icteric appearance of the urine has led us to discontinue the drug at the very earliest onset of jaundice, thus perhaps avoiding more serious liver damage.

Of all reactions the gravest future concern should be given to the so-called re-administration reactions. It has long been recognized that patients who have had episodes of drug fever and skin eruptions are likely to remain sensitized to further administration even with small quantities of the drug. It is known that such sensitization may persist for long periods of time. Only recently, however, has attention been directed to a high per cent of re-administration reactions in patients who had no evidence of toxicity during the primary course. Lyons and Balberor reported that 36 per cent of a series of fifty-three hospitalized patients experienced a febrile reaction usually on the first day of the second course of sulfathiazole. Our percentage has been much lower, but it is possible that such reactions were missed since many of our group were treated in office or clinic practice. However, 75 per cent of the patients were seen for more than thirty days and more than 90 per cent for the duration of chemotherapy. We have had a rather low incidence of clinical sensitizing reactions during the primary course, which we attribute to the termination on the fifth day where 4 grams daily were given and reduction to 2 grams a day where

the period of chemotherapy was extended beyond the fifth day. It would seem that there may be a quantitative relationship between the dosage and the incidence of clinical sensitization as well as for the type described by Lyons and Balberor, which we classify as a subclinical or "hidden" sensitization. Unfortunately as more of the population become sensitized during the treatment of minor diseases, the greater the seriousness for such patients with diseases otherwise associated with a high mortality who may be denied the benefits of sulfonamide therapy.

It is well to re-emphasize caution in the use of the sulfonamides where individuals are concerned with transportation, either private or public, or who are in industrial positions where dulling of mental acuity adds to the hazards for themselves or for others. Naturally this also applies to a variety of military activities.

Failures and Problems of Chemotherapy in Gonorrhea

There are several types of failure of chemotherapy in gonorrhea. One outstanding group is that of local complications along the urinary tract, such as (1) para-urethral sinusitis, (2) parafrenal fistula, (3) chronic folliculitis, (4) Cowperitis, (5) stricture and (6) prostatitis. Procedures must be instituted to establish drainage, preferably after sulfathiazole has been administered during a previous period of twenty-four hours, to avoid further extension of the infection by the chosen manipulation.

Another important type of failure is that in which the gonococci have become apparently sulfonamide resistant. The management here preferably is thermo-chemotherapy if the patient can afford hospitalization. However, we have cured a substantial percentage of these patients by combining specific vaccine therapy with chemotherapy.

There is a low incidence of infections, totally refractory from the onset of chemotherapy, and these patients should be strongly urged to submit to combined fever and sulfonamide therapy.

A more difficult problem is encountered in the group in which there is a prolonged period when the patient is symptomless after the first course of chemotherapy, and then develops a so-called late relapse. While there is no question but actual late relapses do occur, it is here that a differentiation from re-infection is extremely difficult and sometimes impossible.

It has been our experience that infections otherwise uncomplicated which fail on one course, respond successfully to a second course after a short interval of rest in something more than 50 per cent of the patients.

Atypical Infections

It is not uncommon to see patients who have what may be described as atypical infections. The objective symptoms are comparatively mild, even though in some instances the patients never had gonorrhea previously. Generally these infections are somewhat similar to nonspecific urethritis. Prolonged search of the smears reveal a few extracellular Gram negative diplococci typical in morphology of gonococci. The diagnosis is confirmed by culture. Many of this group are more resistant to chemotherapy than typical infections, requiring two or three courses before cure is established, and often it is necessary to combine chemotherapy with adjunctive local treatment. The occurrence of such atypical infections further indicates the advisability of deferment of the diagnosis in apparent nonspecific urethritis until several examinations have been made.

Problems in Industrial Practice

It occasionally happens in industrial practice that gonorrhea has to be differentiated from injury as a cause of disability, particularly of the type with swollen joints, persistent backache and epididymitis. It is important that a differential diagnosis be made since the employer is required to pay compensation during disability of nonspecific epididymitis, even though antedated by a nonspecific prostatitis. The employer, of course, is not liable for disability from gonococcic epididymitis. Patients with subacute swellings of the ankle or knee have claimed that they resulted from various types of injuries. In several such instances where gonococci were found the patients admitted previous gonococcic infection when confronted with the evidence of the laboratory examinations. These patients had no urethral discharge at the time of the disability claim, but, as a rule, objective evidence of infection could be found to corroborate the laboratory findings. Here, cultural studies are particularly

important to submit to the Industrial Commission as more substantial evidence.

Determination of Cure

In the determination of cure following chemotherapy and in the presence of favorable response, several days must elapse before clinical or laboratory measures are reliable criteria. We still believe that a definite routine of provocative measures should be carried out, while accepting that clinical activation is more difficult to induce than before the days of chemotherapy. These consist chiefly of chemical irritation with dilute silver nitrate, mechanical irritation of the urethra and its follicles with sounds, cellular irritation by massage of the prostate and other accessory glands, and biochemical stimulation through the use of specific and nonspecific vaccines. Accessory provocative agents should be given some consideration in the determination of cure, such as the ingestion of intoxicating beverages, unusual physical activity, sexual stimulation and the administration of specific or nonspecific protein.

Laboratory measures, however, are of the greatest importance and to obtain the optimum results a definite routine should be followed, which is satisfactory for the collection of specimens for both smear and culture. Since at this stage most patients have no urethral discharge, a shortcut and rather satisfactory procedure is to strip the urethra and prostate before the patient is permitted to void, since this type of specimen will include the exudate from the urethra which would otherwise be washed out by the urine. However, if insufficient prostatic secretion is obtained, the patient is instructed to void a small quantity of urine and the centrifuged sediment is examined. All microscopic examinations should be made after staining with the Gram method. Above all, in order to give the laboratory opportunity for maximum efficiency, suitable exudates must be obtained and thinly smeared on clean slides.

While microscopic examinations when repeated are highly efficient in the male, the additional use of cultures is advisable where available. However, in women, cultures are almost mandatory in the determination of cure. In either sex without cultures, the observation period should be substantially extended and protection advised in the interim to avoid infection of others.

Nonspecific Prostatitis

So far no sulfonamide has been developed that has any remarkable influence on infections in the prostate. However, chemotherapy is indicated when such infections are associated with symptoms arising within the urethra, such as urethral discharge, burning or other disturbance of urination. For controlling such symptoms a relatively short course of a small intake of the drug, such as 2 or 3 grams daily, is sufficient. Since chemotherapy is of little value it is well to remember all the measures of merit in the presulfonamide era, such as correction of associated pathologic conditions, like strictures, prostatic calculi, benign hyperplasia of the prostate, and all other causes of obstruction at the neck of the bladder. Suitable treatment must be given for surgical or medical conditions above the bladder which may serve as a focus for the prostate. As for the management of the infection itself in the prostate, the removal of distant foci, such as tonsils and teeth, is still important as an accessory measure. Since the uncomplicated type of prostatitis is most often due to the gram positive coccus group of bacteria, in selected instances the administration of neo-salvarsan in small doses is indicated. Finally, regular and systematic courses of prostatic massage must be resorted to to establish drainage and relieve subjective and objective symptoms of infections. Great caution should be used in predicting cure in a specified period of time or of assuring the patients that recurrence will not take place.

Bladder and Upper Urinary Tract

It should first of all be re-emphasized that surgical conditions may be masked temporarily through the administration of one of the sulfonamides.

Infections apparently uncomplicated which fail after one course of chemotherapy should be submitted to a complete urological examination before sulfathiazole or sulfadiazine is resumed. The possible exceptions are those infections due to bacteria known to be naturally resistant.

Most acute and first infections without associated pathologic conditions respond promptly to sulfathiazole or sulfadiazine through the administration of one comparatively short course of either drug, such as for five to ten days and with a reasonably high initial intake of the drug, at the onset of chemotherapy. Chronic

infections are prone to have intermittent and acute exacerbations that are difficult to differentiate from first infections. Frequently a clue may be obtained by the history of previous acute episodes of the infection or by the presence of symptoms suggesting associated pathologic conditions. In most instances only temporary relief is obtained through chemotherapy, and cure follows only when and if the associated complications are located and corrected. There are, however, several other causes of failure not associated with local complications, and of these the outstanding type is that in which naturally sulfonamide-resistant bacteria are the cause of failure. Streptococcus fecalis, pseudomonas, streptococcus viridans, and the mucoid type of Gram negative bacilli, such as Friedlander's, have in my experience proved most troublesome. Chronic infection of the prostate, particularly when associated with calculi in the prostate, may reinfect the bladder and upper urinary tract after a seemingly successful response to the upper infection. You are all familiar with the associated pathologic conditions that are likely to cause failure, such as the various causes of residual urine, diverticula, incrusted cystitis, etc. I have been impressed with the frequency with which silent calculi of the upper urinary tract have been found during the routine and complete urological examinations. Also I have seen a number of patients with chronic pyelonephritis where the function of the kidney was but slightly reduced and yet no obstructive lesions could be found. Here chemotherapy proved of only temporary benefit.

Indications for Small Dosage of Sulfathiazole and Sulfadiazine

It has been my experience that it is a mistake to use small amounts of the drug, such as 15 to 20 grains daily, for acute infections, although it must be granted that a certain per cent be cured. There is danger, however, that the bacteria may develop drug resistance and later prove refractory to a larger intake. There are, however, a few indications for the use of small amounts of the drug. In general, this group includes those various conditions in which there is marked reduction of the renal function, such as in the terminal stages of polycystic disease of the kidneys or in advanced chronic pyelonephritis. Even here I believe the sulfonamides should be given intermittently and for the purpose only of tiding the patient over an acute crisis. Following such medication there is frequently a favorable turn in the blood chemistry, and hypertension, if present, may be likewise influenced for a considerable period of time. It has been my experience that in the management of these patients it is better to give interrupted courses than to give small amounts of chemotherapy over a long period of time. In a similar way, the management of infection in very old people is quite satisfactory with such interrupted courses in small dosage, thus avoiding the development of undesirable toxic manifestations of the drug.

Chemotherapy in the Prophylaxis of Instrumental Reactions

When sulfathiazole or sulfadiazine is used for the prevention of chills and fever following instrumentation with sounds, catheters and cystoscopes, it is advisable that the drug be given for a period of twenty-four hours preceding such examination. Occasionally it is well to extend this period of chemotherapy for twelve hours after instrumentation, particularly if the patient has had a history of previous instrumental reactions. Usually 2 grams in divided doses for the twenty-four-hour period preceding examination is sufficient to prevent reactions. It has been my experience that such short and intermittent courses of the sulfonamides seldom produce hypersensitivity.

Other Chemotherapeutic Agents

It is generally accepted that the drug of choice for hemolytic streptococci is sulfanilamide, but this organism is comparatively rare in the urinary tract. When present, however, sulfanilamide is indicated. I have made considerable observations on another drug called sulfacetamide, which is less toxic and somewhat more effective than sulfanilamide, but in my experience it has never cured any infection of the urinary tract which had previously failed on sulfathiazole or sulfadiazine. The only preference for sulfacetamide would seem to be where there are conditions that may predispose to excessive precipitation of sulfathiazole or sulfadiazine in the urinary tract, such as the various obstructive uropathies due to calculous or other diseases.

As regards the present state of mandelic acid, it seems to be indicated chiefly for the treat-

ment of streptococcus fecalis infections and even here has not been highly favorable. There is, however, still a place in selected incidences for the use of prolonged acidification to control infections, either alone or intermittently combined with methenamine or even better methenamine salicylate. In general, the principal reason for their use is protection of the upper urinary tract in patients with non-corrective conditions, such as cord bladder, and in persons in whom surgery is contra-indicated and in whom a fair trial of sulfonamides have failed to eradicate infection. It serves chiefly as a palliative measure that can be safely used over long periods of time.

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Hyperparathyroidism with Osteitis Fibrosa Cystica*

Report of a Case

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A case of hyperparathyroidism is reported, the initial incident being a fracture of a femoral neck. X-rays revealed decalcification of all bones. Microscopic examination of specimens of bone removed at the time of insertion of a Smith-Peterson nail, confirmed the diagnosis of osteitis fibrosa cystica. The patient refused parathyroidectomy, but received x-ray therapy to parathyroid glands. She subsequently suffered fractures of both femurs while in bed. The patient finally submitted to parathyroidectomy, a parathyroid adenoma being removed. Improvement was progressive, except for a short period of hypocalcemia, with marked redeposition of calcium in entire skeleton. Uneventful recovery was marred only by pelviolithotomy for urinary calculus.

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■ HYPERPARATHYROIDISM is not a common disease. In a review of one hundred thirty-five cases in the literature, Wilder and Howell[2] found the greatest incidence in the North Atlantic States, with Scandinavia, Belgium and Holland second, England and Scotland third, the Upper Mississippi Valley (incuding Michigan) fourth, Germany and Austria fifth, France sixth, and Italy seventh. We wish to present a case of hyperparathyroidism with multiple fractures, which showed no clinical improvement with irradiation, and with regression of symptoms only following parathyroidectomy.

M. D. L., adult, white, female, was admitted to the hospital on June 6, 1940, with a fracture of the neck of the right femur, with marked decalcification of all bones. There was a history of the patient stumbling and falling, thus incurring the fractures, but no other significant history. On June 8, the patient was taken to surgery and a Smith-Peterson nail inserted in the fractured femoral neck. It was found that the bone at the proximal end of the femur was very soft, the operator being able to push the guide wire into the neck and head and easily inserting the Smith-Peterson nail over it. A single hip spica was applied because of the softness of the bone. Small pieces of bone were taken for biopsy, that from the trochanter being quite spongy, while that from the shaft of the femur was more fibrous. Microscopic examination revealed no areas of cystic degeneration, but some areas were almost necrotic. There was an overgrowth of fibrous tissue with a poor blood supply. Soft bone production was noted.

On admission the blood calcium was 16 mgm. per 100 c.c., and the blood phosphorus 2.4 mgm. per 100 c.c. Sulkowitch reagent tests for calcium in the urine showed a moderate to a large increase in amount. Routine surgical blood count on admission revealed: Hemoglobin 59 per cent (Dare), white blood cells 14,000, polymorphonuclears 61 per cent, lymphocytes 39 per cent. Differential diagnosis included consideration of von Recklinghausen's disease, metastatic carcinoma, multiple myeloma, and to a lesser extent osteomalacia, Paget's disease, and polyostotic fibrous dysplasia. The diagnosis of hyperparathyroidism was made from the clinical history, the typical blood picture, and the x-ray evidence, and was confirmed by pathological examination of the bone specimens removed at surgery. The patient was informed of this diagnosis and advised to have a parathyroidectomy. This she refused. While in the hospital she received x-ray treatments to the region of the parathyroid glands, receiving a total of 240 roentgens on each of three successive days. She was discharged from the hospital on June 20, 1940.

The following August 7, the patient was readmitted to the hospital with a history of slipping off a bedpan while in bed at home, and noted pain in her left thigh, and inability to move her left lower extremity. X-ray examination revealed a fracture 10 cm. from



Fig. 1. Roentgenogram of pelvis and upper femora on the first admission. Fracture of neck of right femur and of pubis on left. Marked decalcification of all bones.



Fig. 2. Two-thirds of left lobe of thyroid with the parathyroid adenoma attached.

the proximal end of the left femur. The fragments were properly aligned and a bilateral hip spica was applied. A blood count at this time revealed: Hemoglobin 50 per cent (Dare), red blood cells 3,190,000, white blood cells 14,700; differential: polymorphonuclears 87 per cent, lymphocytes 10 per cent, basophiles 2 per cent, transitionals 1 per cent. The patient received Haliver oil capsules with vitamin D, ferrum reductum, and dicalcium phosphate. The patient also received a total of 540 roentgens of x-ray therapy in two days. She was again discharged home, refusing to have a parathyroidectomy.

On November 1, less than three months later, the patient was again admitted to the hospital, with a history that while being moved in bed, she suddenly felt a sharp pain in the right leg. X-ray revealed a fracture in the proximal one-third of the shaft of the right femur, just distal to the trochanters. The fragments were in good alignment, and the bilateral hip spica was maintained. X-rays showed most of the calcium displaced from the bones. During this stay in the hospital the patient received a total of 2,800 roentgens of x-ray therapy to the parathyroids over a period of twelve days. She was discharged home on November 20.

The patient failed to show any clinical improvement in her condition, and finally on February 11, 1941, entered the hospital to have a parathyroidectomy. X-rays at this time revealed absorption of bone around the Smith-Peterson nail, and the fracture site below it, more decalcification of all bones, and an increase of cystic areas present. The blood picture showed some improvement however, the blood calcium being 10.4 mgm. per 100 c.c., and the blood phosphorus being 2.9 mgm. per 100 c.c. The metabolic rate of the patient on two determinations was found to be —34, this figure not being considered accurate however, because the patient was in a body cast. She was placed on Lugol's solution, and additional calcium in the form of calcium gluconate by mouth. The general condition of the patient improved and a parathyroidectomy was performed on February 28.

Operative Technique.—Operative technique in this case followed the plan of thyroidectomy. A Kocher collar incision was made, with median longitudinal exposure of the neck. The left lobe of the thyroid was exposed and a nodule viewed behind the gland, and another in the superior left pole. The nodule in the thyroid was the size of a small hazelnut, while the nodule behind the pole was adherent to the posterior capsule and trachea, and was the size of a small olive. This nodule and two-thirds of the left lobe of the thyroid were removed enmasse. Further exploration of both sides of the neck and into the upper chest area did not reveal any more enlarged parathyroids.

Pathological examination by Dr. W. P. L. McBride proved the nodule attached to the trachea a parathyroid adenoma, while the nodule in the superior pole of the thyroid was a simple thyroid adenoma.

The patient complained of numbness and tingling in the arms and face on the second postoperative day. On March 7 she was given a transfusion of citrated blood and had a slight reaction. She became very nervous and on March 18 began to have muscle twitching and a prickling sensation. The muscle twitching was relieved with calcium gluconate intravenously. A mild sedative was then given each day and more calcium gluconate by mouth. The patient had checkup x-rays of her skeletal system taken March 28, these showing little change from those taken on this last admission to the hospital. The patient was discharged home March 31, with no further evidence of muscle twitching or prickling sensations.

X-rays taken early in June, 1941, revealed no gross changes since the previous examination. Blood studies at this time revealed the blood calcium to be 8.7 mgm.



Fig. 3. Roentgenogram five months following parathyroidectomy. Note fracture below trochanter of right femur with resorption of bone. Recalcification of all bones.

Fig. 4. Roentgenogram one year following parathyroidectomy.

per 100 c.c., and the blood phosphorus 4.5 mgm. per 100 c.c. Checkup x-rays taken August 9, 1941 revealed much improvement with recalcification of all of the bones. The patient was then taken out of the cast. During the course of this illness the patient had had several attacks of renal colic and was forced to return to the hospital September 3, 1941, for a pelviolithotomy of the left kidney. A large stone was removed from the kidney pelvis. The last x-rays were taken February 21, 1942, at which time further progress in recalcification of the bones was noted, and the patient was able to be about without support.

Summary

We have presented a case of hyperparathyroidism which had progressed on to osteitis fibrosa cystica, occurring in a region where the incidence of such disease is not great, but with characteristics more or less classical; *i.e.,* occurring in a thirty-five year old female, with pathological fracture of the neck of the femur as the first symptom noted by the patient. A secondary anemia was present along with urinary calculus and renal colic. There were multiple fractures caused by mild strains; no regression of osseous changes following a total of 4,060 roentgens of irradiation therapy to the parathyroids was demonstrable. Following surgical removal of a parathyroid adenoma, there were a few early signs of a developing tetany, which were quickly relieved with calcium gluconate intravenously. This development was perhaps due to the removal of the entire parathyroid tumor, which Albright[1] points out in a recent excellent review of parathyroid physiology and pathology, to be due to a cessation of the process of bone destruction, while the new bone formation continues at terrific speed with the resultant high rate of calcium deposition in the bones, and hypocalcemia and tetany.

This patient showed marked recalcification of all bones at five months following parathyroidectomy.

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AWARD FOR RESEARCH ON ALCOHOLISM

A prize of $1,000 for outstanding research on alcoholism during 1943 is offered by the Research Council on Problems of Alcohol, Dr. I. Ogden Woodruff, chairman of the board of directors, announced.

Any scientist in the United States, Canada or Latin America is eligible for the award. The research must contribute new knowledge in some branch of medicine, biology, or sociology important to the understanding, prevention or treatment of alcoholism. A report on the work and resulting conclusions must be submitted on or before February 15, 1944.—*Science News Letter,* February 7, 1943.

Diagnosis and Treatment of Abdominal Injuries*

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Injuries of the abdomen divided into three groups:
Group I—Injuries without penetrating wounds.
Group II—Injuries with penetrating wounds.
Group III—Abdominal symptoms due to injuries elsewhere.
The occurrence and symptoms of each group will be discussed along with the treatment.
The patient with penetrating wounds of the abdomen should be subjected to immediate laparotomy even though in relatively bad condition. Certain conditions under which laparotomy should be performed even when there is no external mark of injury.
Diagnosis and treatment of rupture of the diaphragm. This may occur as late as several weeks after the original injury and may be mistaken for coronary occlusion.
Anesthesia.
Proper incisions for treatment of abdominal injuries.
The use of the sulfonamide drugs and adjuvent treatments.

■ This paper is made up of comments on the early and therefore the most important clinical features of abdominal injuries. Modern warfare, industry and methods of travel have made violent contusion and compression of the abdomen more frequent than they used to be. It is time to reconsider the whole subject of abdominal trauma in the light of accumulated clinical experience and newer concepts on the effects and treatment of hemorrhage, asphyxia and infection.

Abdominal injuries have many characteristics in common. They are often associated with injuries of other parts of the body, especially of the chest and spine; they are often not confined to a single organ; their treatment often requires the correction of systemic derangements immediately dangerous to life; they always demand early diagnosis, which must be based almost entirely on history and physical examination, for laboratory tests are of little value. They should, therefore, be considered together as a clinical whole and not as a heterogeneous collection of injuries of separate abdominal organs.

Any discussion of abdominal injuries is incomplete if it does not include consideration of abdominal distention due to extra-abdominal trauma. This most commonly occurs, and is most severe, after injuries of the chest, but may follow head injuries or major fractures, especially of the spine. It may be the chief cause of death. Sometimes the clinician fixes his attention on the primary injury, especially if this is of the chest, and ignores the abdominal distention. He thinks that the cyanosis, labored breathing, wet skin, and fast, feeble pulse are caused by injury to the lungs or heart, when they may really be due chiefly to distention. Sometimes he overlooks the primary injury entirely, in this case usually a fracture of the spine, and thinks the patient has suffered grave intra-abdominal injury which has caused peritonitis.

The effects of distention are deadly. Marked distention of the stomach of a dog will kill it in about two hours; moderate distention in about six to eight hours; distention of the intestine in twelve to twenty hours. We have demonstrated that the cause of death is asphyxia brought about by elevation of the diaphragm. This makes the pressure in the chest positive except during inspiration. The flow of blood to the lungs under these conditions is impeded and the blood is not properly supplied with oxygen while in the lungs because they cannot be fully distended. Lack of oxygen damages the capillary endothelium in all parts of the body so that it cannot prevent the escape of blood albumen into the tissue spaces. Hence the osmotic pressure of the blood falls to a level at which the blood cannot absorb fluid from the tissues. Then hemo-concentration occurs. This vicious chain of events occurs sooner if the lungs are damaged by trauma or compressed by fluid in the pleural cavities.

We now have very good proof that the rapid accumulation of gas in the stomach and intestine after the injuries mentioned, is due almost wholly to gulping of air which the patient is unable to regurgitate. With this understanding of the cause of distention we are able to treat it effectively. The best treatment is prevention. This can be accomplished by continuous aspiration of the stomach through a Levine tube. This should be started as soon as the patient shows even slight distention. The Miller-Abbott tube should be passed if there is well-marked distention of

*Read before the Seventy-seventh Annual Meeting of the Michigan State Medical Society at Grand Rapids, Michigan, September 25, 1942.

the intestines, provided by then the patient is not beyond all hope of recovery. If the patient has cyanosis and edema he should be given oxygen and large intravenous injections of plasma. He should not be given water while in this condition. The presence of edema shows that he already has plenty of water in his tissues. His trouble is not lack of water but a faulty distribution of water. Too much of it is outside his vascular channels. What he needs is restoration of the osmotic pressure of his blood. Administration of water will make his condition worse, because it washes more albumen out of his capillaries and increases his edema. It has been shown by experiment that the hemoconcentration brought about by asphyxia can be prevented by the administration of adequate quantities of plasma; also that the damage to the capillary endothelium by asphyxia is quickly repaired by the supply of sufficient oxygen to the blood.

Classification

Injuries of the abdomen are usually divided into two groups according to whether or not penetrating wounds of the abdominal wall are present.

Group I—Injuries Without Penetrating Wounds of the Abdominal Wall

These injuries may be caused by—

1. A blow on the abdominal wall over an organ, or by compression of an organ against the spine.
2. Great increase in the intra-abdominal pressure.
3. The introduction of gas, water or solid objects into the rectum.

General Features of Injuries Due to Blows or Compression.—The following are some pertinent clinical facts on these injuries:

1. The liver, pancreas, kidney, spleen, stomach, intestine, mesentery and the distended urinary bladder may be ruptured by a direct blow or by compression against the spine. *Large blood vessels are seldom so injured.*

2. Hemorrhage is the chief cause of the early symptoms. It is more liable to be immediately fatal with rupture of the liver than with rupture of the other organs. Estimation of the amount of hemorrhage immediately after the injury must be made by observation of the general condition of the patient. Examination of the blood for this purpose is useless until after the passage of several hours. The hemorrhage will be intraperitoneal with rupture of the liver, spleen, gastro-intestinal tract and mesentery; extra-peritoneal with rupture of the kidney or pancreas. Thus, hemorrhage from a ruptured kidney or pancreas causes a localized swelling, and hemorrhage from other organs does not. The demonstration of free fluid, that is blood, in the peritoneal cavity, which is sometimes stated to be a sign of rupture of the liver or spleen, is of very doubtful diagnostic value, because two quarts of fluid is perhaps the smallest quantity which can possibly be demonstrated by physical examination.

3. Rupture of the liver may be diagnosed by a consideration of the site of trauma, by signs of a large internal hemorrhage and by localized tenderness. The demonstration of elevation and immobilization of the right half of the diaphragm by x-ray examination is evidence of this injury.

Adult liver always contains bacteria, both ærobic and anærobic. They are practically avirulent under normal conditions, but decompose dead liver tissue with the formation of violent toxins. These cause the severe intoxication which follows subcapsular or interstitial hemorrhage in the liver. This, however, occurs after the early stage considered in this paper has passed.

All authorities agree that hemorrhage from the liver is liable to continue for a long time. This is explained by the structure and relation of the liver capillaries, which have very delicate walls which cannot retract from the comparatively rigid trabeculæ of liver cells around them. Hence the capillaries remain wide open.

Writers state that a slow pulse, due to the absorption of bile salts, is a sign of rupture of the liver. This is not true, because the heart rate may be slowed by a severe hemorrhage from any source. Thus, pulse rates as low as sixty may be present for a short time soon after the rupture of an ectopic pregnancy. The bradycardia is most probably due to stimulation of the vagus center by anemia.

4. Diagnosis of rupture of the spleen depends upon the presence of signs of internal hemorrhage, on localized tenderness, *and* on consideration of the site and nature of the trauma. Pain in the region of the left shoulder or left clavicle is sometimes stated to be a symptom of rupture of the spleen. It is, however, seldom present.

Hemorrhage from the spleen is in general less than from the liver, and less liable to continue for a long time.

5. The diagnosis of rupture of the kidney is comparatively easy. The presence of signs of hemorrhage and of fullness in the region of the kidney, along with blood in the urine, is diagnostic. Instrumentation of the urinary tract other than catheterization is usually not necessary.

6. Rupture of the pancreas presents a fairly definite clinical picture, the elements of which are:

(1) The nature of the injury.
(2) Excruciating pain in the region of the pancreas.
(3) The development of a mass above the umbilicus.
(4) After a short time a great collection of ascitic fluid.

7. Rupture of the intestine by compression against the spine may be, for a period as long as ten to twelve hours, accompanied by no signs of injury whatsoever. Then suddenly general peritonitis appears. The duodenum and the first inch or two of the jejunum, because of their fixed position in front of the spine, are the parts of the intestine which are liable to rupture by compression. The stomach may be so injured by compression against the transverse processes of the lumbar vertebræ.

Injuries Due to Increased Intra-abdominal Pressure.—The mechanism which causes a great increase in the intra-abdominal pressure is probably a jack-knifing of the body at a time when the diaphragm and abdominal muscles are tightly contracted. There has been considerable discussion by traumatic surgeons on whether or not increased intra-abdominal pressure can cause injury to any part of the gastro-intestinal tract. The intra-abdominal pressure acts with equal force on all surfaces of the stomach and intestine. It is therefore probable that it can injure them only under exceptional circumstances. I have observed a single instance in which this happened. This was the sudden rupture of a calloused duodenal ulcer when the patient lifted a heavy box from a truck to a platform. It is conceivable that in this case the thin roof of the ulcer was torn by being pushed into the crater or by traction on an adhesion between it and a neighboring peritoneal surface. I have never observed or even heard of a case of appendicitis which could possibly be attributed to trauma.

The usual lesion caused by intra-abdominal pressure is rupture of the diaphragm. This is more frequent than is commonly supposed. In my own cases the rupture has always been to the left of the cardia in the region where the vertebræ and costal components of the diaphragm join. In two instances the abdominal organs did not enter the thorax until several weeks after the original injury. In both of these the physician who treated the patient made a diagnosis of coronary occlusion, because the symptoms were circulatory collapse and agonizing pain in the precordium and left shoulder. This injury is likely to be overlooked when severe injuries outside the abdomen are present. The possibility of its presence should be kept in mind in all cases in which the body of the patient has undergone violent trauma, especially if he is cyanotic and has difficult breathing. The diagnosis can, of course, be established with ease and certainly by careful physical and x-ray examination of the chest.

Abdominal Injuries Due to the Forceful Introduction of Air, Water or Foreign Objects into the Rectum.—These injuries are comparatively common. My personal experience with them includes:

Two cases of rupture of the rectum due to the injection of enemas under great pressure by hydro-therapeutists,

Two cases of rupture of the rectum—one by proctoscope and one by the handle of a pitchfork which passed through the anal canal and tore through the rectum just above the prostate,

Two cases of injury by objects of glass introduced into the rectum,

One case of perforation of the rectum by the examining finger,

One case of rupture of the rectum caused by compressed air.

Group II —Penetrating Wounds of the Abdomen

In some cases there is doubt as to whether or not the abdominal cavity has been penetrated. This is often the case with gun-shot wounds, stab wounds and bullet wounds in which the sites of entry and exit are close together. Stereo

plates will show the exact location of small shot. In many cases this question cannot be answered except by thorough exploration of the wound. We cannot be sure what organs have been traversed by a bullet by drawing a straight line between the lines of entry and exit, because it is almost certain that the patient's posture and the relations of his abdominal organs were different at the time he received the injury from what they are when we examine him. It is practically certain that any missle which has traversed the peritoneal cavity in any direction will have wounded one or more of the abdominal organs.

Diagnostic Study.—Diagnosis should be based on a careful clinical history, which should include all circumstances of the injury, on a careful physical examination and, in most instances, an x-ray examination. Stereo or antero-posterior and lateral x-ray pictures of the abdomen should be taken to locate bullets which have made no wound of exit. In case the injury is due to a violent blow on the abdomen or violent compression of the abdominal contents, then x-ray pictures of both the chest and abdomen should be taken, if possible with the patient in the upright position.

Physical Examination.—The physical examination should be thorough and complete. It is very important to estimate the amount of hemorrhage. This can be done as well as is necessary from the appearance and general condition of the patient,—the degree of pallor, the mental state, the presence or absence of air hunger and thirst. Bradycardia, shortly after a hemorrhage, may indicate a large loss of blood. A fairly good blood pressure at this time is no proof that a large loss has not occurred.

Laboratory examination of the blood is useless in the early period after the injury, for it will show no deviation from normal.

The chest and spine should be carefully examined. The abdomen and lower extremities should be tested for anesthesia or paralysis. The abdomen shortly after the injury will hardly ever be found distended. Its muscles will usually be contracted. The degree of mobility of the abdominal wall should be noted; also areas of localized tenderness to pressure and any tumifactions, for example, in the region of the liver or pancreas.

It may be possible by careful percussion and x-ray pictures to demonstrate free gas in the peritoneal cavity. When a penetrating wound due to a bullet is present the course of the bullet should be judged as nearly as possible and an opinion formed as to what organs have probably been injured. Signs of general peritonitis in the first few hours after a gunshot wound of the abdomen has been received, are uncommon. Their presence in this period is strong evidence for perforation of a distended colon or stomach.

The diagnostic study should enable us to form a good opinion of the general condition of the patient and of what organs have been injured. It should enable us to make a probable diagnosis of injury of the liver, spleen, kidney or pancreas, a certain diagnosis of rupture of the diaphragm, and a certain diagnosis of the presence of wounds of the gastro-intestinal tract.

Diagnosis of injuries received through the anal canal can usually be made from the history and proctoscopic examination.

Remember that the physical examination may disclose no signs of injury when the patient has suffered a rupture of his intestine from a blow on the abdomen or from the passage of a wheel over it. *A negative examination in these cases should in no case lead the surgeon to postpone laparotomy.*

The foregoing discussion has made it evident that the possibility of saving the patient by operation depends more on the amount of hemorrhage he has suffered by the time he is seen than on anything else. *If he has not died of hemorrhage within the first three hours after the injury there is usually a fair chance of operating upon him without death on the table.*

Pre-operative Preparation.—This consists in the injection of morphine and atropine, in the usual preparation of the field of operation, and in provision for the transfusion of large quantities of blood. As a rule, I believe it is not best to give blood before operation and, therefore, before the source of the hemorrhage has been brought under control.

The Operation.—Delay is liable to increase the risk of operation in most of these cases. Operation should be done as soon as the diagnostic study is complete and all necessary arrangements for meeting emergencies have been made. A

good suction apparatus is almost indispensable.

Anesthesia preferred by the writer is ether anesthesia given with carbon dioxide and oxygen control of respiration.

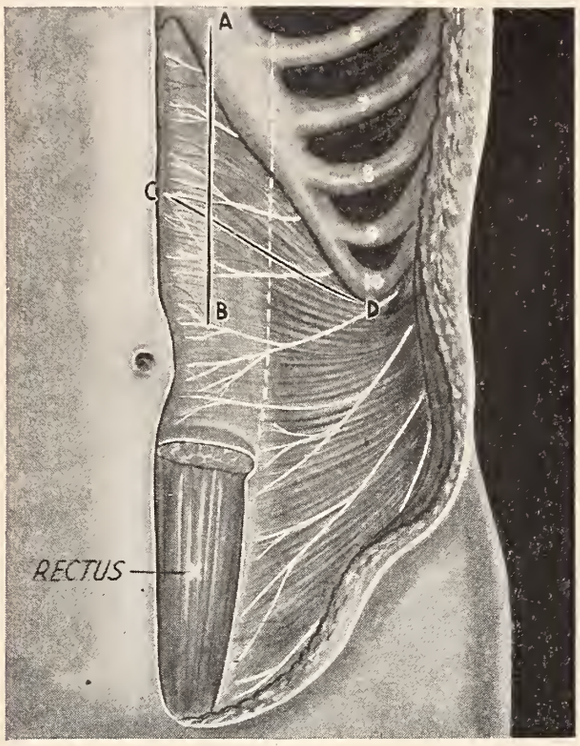


Fig. 1. Transversus abdominis muscle and its aponeurosis. *(a-b)* Line of skin incision. *(c-d)* Line along which fibers of transversus aponeurosis and muscle are separated. It is possible in most cases to avoid injury to nerves.

The incision should provide for good exposure of the site of injury and for easy and secure closure of the wound so that the patient will be in no danger of postoperative evisceration or hernia, even though the wound becomes infected. The diagnostic study will generally show what part of the abdomen should be explored. In injuries by blows or compression the exposure of a single region of the abdomen may be sufficient, but the treatment of a gunshot wound may make it necessary to explore almost every part of the abdominal cavity from diaphragm to pelvis. It is better to carry out this extensive exploration through two comparatively short incisions which will leave the strength of the abdominal wall unimpaired than through one long incision which will not do so. The illustrations show the incisions which I have found most suitable. There is a considerable literature on postoperative evisceration and herniation. These calamities can nearly always be prevented when the incision is above the umbilicus if the operator will avoid dividing the fibers of the aponeurosis of the transversus abdominis muscle. This aponeurosis is the most powerful layer in the abdominal wall. If its fibers are cut they cannot be securely reunited. If they are merely separated they can easily be brought together. Any incision

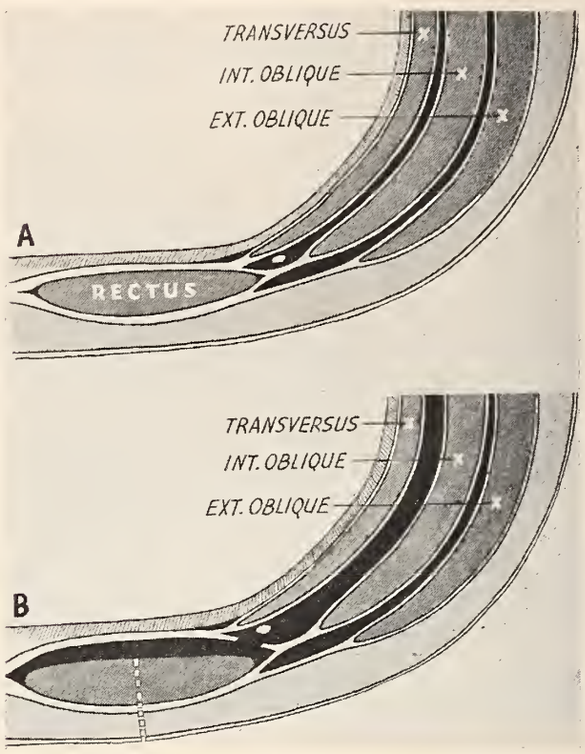


Fig. 2. *(a)* Transverse section of abdominal muscles showing that aponeurosis of the transversus muscle is the posterior sheath of the rectus muscle and showing attachment of aponeurosis of internal oblique muscle to that of transversus muscle at external border of rectus. *(b)* Illustrating how the structures anterior to the transversus muscle and its aponeurosis can be lifted from them by division of attachment of aponeurosis of internal oblique muscle to that of transversus muscle at external border of rectus.



Fig. 3. Lower surface diaphragm showing nerves and attachments.

which avoids division of these fibers is not bad. If they are not cut the patient can breathe better, move around better, is in no danger of evisceration or hernia and is in less danger of postoperative pneumonia or thrombosis. These wounds do not require a tight closure. They therefore tolerate well the presence of sulpha drugs.

For exposure of the abdominal organs below the umbilicus a modification of the Pfannenstiel incision works very well.

Repair of Injuries.—The operator should bear in mind that hemorrhage from wounds of solid organs, such as the liver and spleen, is greatly accelerated by opening the abdomen. He should therefore be ready, when confronted by rents in the solid organs, to close them immediately by digital pressure. Unfortunately, extensive rents of the liver are usually fatal before operation can be performed. Hemorrhage from a ruptured spleen can be controlled at once by freeing it and scuring its pedicle. The same is true of hemorrhage from a rupture of the kidney. Rupture of the pancreas in which the hemorrhage has apparently ceased is best treated by the insertion of a pack of Penrose drains down to the traumatized portion of the organ through an opening in the gastrohepatic omentum. Bullet wounds of the solid organs may require no special treatment and are in many cases best let alone. In case a bullet has traversed the peritoneal cavity as well as the kidney, it is, of course, evident that the injuries in the peritoneal cavity should be treated first.

The treatment of bullet wounds of the stomach and bowel demands that every wound be found and closed, and that all particulate matter be removed from the peritoneal cavity. If the bullet has traversed the abdomen in a vertical or diagonal direction it may be necessary to examine every inch of stomach and intestine. Wounds on the posterior surface of the fundus of the stomach may be very hard to find and to close. The same is true of retroperitoneal wounds of fixed portions of the colon. These may require mobilization of the injured bowel by incision of the peritoneum along its outer margin. Feces extravasated from the wounded colon and feces within it at the site of the injury should be removed with a suction apparatus before the wound is closed. The surrounding surfaces must then be cleaned with extreme thoroughness. In case the bowel contains a quantity of fecal material it may be desirable to establish a temporary complete blocking of its lumen just proximal to the site of injury. This can readily be done by pulling the bowel through the wound and holding it there by means of a heavy glass tube passed through its mesentery. This puts the injured portion of the bowel at rest during the process of healing. A small opening can be made in the extra-abdominal loop of bowel after a day or two, and after six to eight days the glass tube can be removed and the loop allowed to retract gradually into the peritoneal cavity. The foregoing procedure is especially valuable in the treatment of wounds of the pelvic colon. Most wounds of the small intestine which do not involve its mesenteric border can be treated by simple closure. A bullet may do a frightful amount of damage to a mass of closely packed and empty small intestine.

The writer has yet to be convinced that it is necessary or desirable to use the sulfonamides in the peritoneum after the repair of injuries to the bowel. I am not convinced that these drugs may not even invite the occurrence of late infection by producing serosanguinous exudates which interfere with the powerful natural resistance of the peritoneum to infection. They will do no good in case of a leak in the bowel, and it is questionable whether they can prevent infection if particulate matter is left in the peritoneal cavity. I have applied them in a considerable number of cases to the abdominal wound, and have learned by experience that, when this is done, the wound should be very loosely closed to allow the escape of the bloody exudate which they cause. They restrain infection, in the abdominal wound, but they slow the process of healing.

Rupture of the diaphragm is one abdominal injury which does not demand immediate operation. It is not likely, unless associated with other injuries, to be immediately fatal. It was not so in any one of seven personal cases. In fact, it had not been diagnosed in any of these until late after the accident which caused it. It may be best to delay operation until the patient has become accustomed to breathing with one lung and has adapted himself to the changed mechanical conditions in his thorax, but it should not be too long delayed because of the danger that more of the abdominal organs may be sucked into the chest and because the edge of the orifice in the diaphragm may cause intense venous congestion of the displaced organs. This strangulation had occurred in one of my patients and made the operation extremely difficult and dangerous. The replacement of the abdominal organs and the repair of the rent in the diaphragm is best accomplished through a high left rectus incision which preserves the fibers of the transversalis muscle and its aponeurosis. This gives ample exposure. The orifice in the diaphragm should now be exposed. If it is tightly constricting the organs which have passed through it, no effort

should be made to pull them back into the abdomen. This will be both dangerous and unsuccessful. It is best to enlarge the rent in the diaphragm by division of the diaphragm backward and outward until the organs can easily be pulled down. In some cases the entire left side of the chest may be filled with stomach, large bowel, omentum and small intestine. In this case the opening in the diaphragm should be enlarged until it admits the entire hand, which can then be passed above the mass of abdominal viscera which it can then push downward into the abdomen without danger or difficulty. The rent in the diaphragm can easily be closed by the insertion of interrupted stitches of cotton or silk thread placed in order, without tying and from without inward for the entire length of the rent. With each successive suture downward traction can be made to expose the edges of the rent and so make easy the insertion of the next suture. Division of the diaphragm in the above manner does not seriously interfere with its nerve supply, because the posterior part of the left side of the diaphragm is supplied by one of the two main divisions of the left phrenic nerve and the anterior portion by the other. The incision does a minimal amount of damage to this nerve supply, because it passes between the two parts of it.

Postoperative Treatment.—The general postoperative treatment of these patients consists in the transfusion of an adequate amount of blood; in the prevention of distention by continuous gastric suction through a small Levine tube; in the administration of a proper amount of water, salt and glucose by vein; in the administration of oxygen in some cases, and in requiring the patient to breathe deeply, turn frequently and keep his limbs moving. Special indications for treatment must be met as they arise.

Hold this page at right angles to your line of vision to avoid *eyestrain;* the visibility of print is reduced as much as 70 per cent when it is placed flat on a desk and read from an upright position.

The Kenny Treatment of Poliomyelitis*

By Sister Elizabeth Kenny
Australia and Minneapolis



ELIZABETH KENNY, *Brisbane, Queensland, Australia. Originator of Kenny method of treatment for poliomyelitis. Author of "Treatment of Infantile Paralysis in the Acute Stage."*

Infantile paralysis has been regarded in the past as a disease causing muscles of the body to become hypotonic and flaccid. Treatment for such condition was to rest the supposedly affected muscles by the application of splints and casts. On the contrary the muscles affected by the disease of infantile paralysis are hyper-irritable and in spasm. The toneless and supposedly paralyzed muscles are the normal muscles. It is obvious that the true symptoms of the disease are quite the reverse from that of the previous conception. It follows that a treatment devised for flaccid paralysis could not be adapted to a disease in which the muscles have the reverse condition or spasm of the muscles. Spasm is the damaging condition in acute infantile paralysis. Spasm in muscle precedes paralysis and causes destruction of muscles, shortening of muscles, and eventually produces deformities. Treatment properly designed and instituted early will prevent undesirable after-effects.

■ IN presenting my contribution I would like to make it clear that I did not come to the United States of America to demonstrate a treatment for the disease infantile paralysis as it was known throughout the world. On the contrary, I came to seek assistance in research for the cure of the symptoms of this disease which I had proved did exist. The symptoms referred to were exactly the opposite to that which all previous treatment had been evolved. Therefore, my presentation was an entirely new disease and a treatment for this disease. However, if this presentation had not been accompanied with any type of treatment, it would decidedly have cast out all previous types of treatment, for it is only logical to understand that similar treatment could not be practical for opposing symptoms.

My visit to this country was advised by a group of medical men who had made arrangements for me to interview Dr. Melvin Henderson of the Mayo Clinic, Rochester. The chairman of this committee was most anxious for me to visit Dr. Henderson owing to the fact that I had

*Read at the Seventy-seventh Annual Meeting of the Michigan State Medical Society at Grand Rapids, September 25, 1942.

proved to his satisfaction and the satisfaction of a special committee of medical men deputed to visit Brisbane, Australia, from Sydney, Australia, by the New South Wales Hospital Commission, that the opposite symptoms existed in this disease to that universally treated by orthodoxy. This gentleman was most anxious for me to comply with this request owing to the fact that he had previously signed the condemnation of my work in the report presented by the Royal Commission and informed me that he wished to undo, if possible, the tragedy brought about by this erroneous report.

These gentlemen also interviewed the Premier of my state and arranged that I should enter the United States as an official visitor. The Honorable, the Premier, also arranged for the passage to and from America of my assistant and myself and wrote to Mr. Basil O'Connor, president of the National Foundation, announcing my visit and explaining its purpose.

Upon arrival, I considered my first duty was to present my credentials to the National Foundation. I was graciously received by Mr. O'Connor, who informed me that if any institution desired to investigate, the National Foundation would finance the project. However, at this time, no institution in New York would consider an investigation, and I left for the Mayo Clinic, Rochester, en route for Australia. Before leaving, Mr. Cusack kindly gave me the text of the work sponsored by the National Foundation, *Public Health Bulletin,* No. 242—the work of Florence and Henry O. Kendall.

Upon arrival in Rochester, Dr. Henderson made arrangements for me to visit Saint Paul and Minneapolis and interview Drs. Wallace Cole and George Williamson. I also met Dr. Miland Knapp. These three gentlemen asked me to examine certain patients and give an opinion as to whether any improvement could be brought about. These patients had a certain muscle condition that had not been treated in the acute stage. Therefore, deformities had materialized, and it was impossible to restore function to certain muscle groups. I pointed this out to the medical supervisors who kindly gave me permission to change the treatment, remarking that no noticeable improvement had occurred in the patients for eight months. However, with the change of treatment deformities were corrected and a certain degree of function restored in less than one month. A request was then sent to the National Foundation for funds to investigate the method. The funds were supplied at a later date. The deformities were corrected and function restored in the patients referred to above, by the treatment evolved by me for the opposite symptoms to that expressed in the official textbook *Public Health Bulletin,* No. 242. The deformities had materialized and the restoration of function prevented owing to the lack of knowledge of the existence of the true symptoms of this disease and a treatment for these symptoms.

For your information, I will now present to you the findings of Doctors McCarroll and Crego in their investigations published in the *Journal of Bone and Joint Surgery,* October, 1941. The orthodox procedures were carried out in six different ways. One of Mr. Kendall's own trained technicians was employed to give this particular type of treatment. The results were, according to the report, most discouraging. The highest percentage of recoveries in any treated group was 15. Another group was under observation by these gentlemen. This latter group did not receive any type of treatment and the percentage of recoveries was higher, being 19 per cent. These figures have been extensively quoted and used in argument against any type of early treatment. The aggregate percentage of recoveries in the full group being 12 per cent and the non-treated cases averaging 19 per cent would lead one to believe that this investigation had proved that treatment was not of any value in the early stages. However, it was not then known that all of the six modifications of orthodox treatment were evolved for a disease that did not exist and that the 19 per cent recoveries in the non-treated cases after prolonged observation of many months compared most unfavorably with the 55.3 per cent full recoveries obtained in 32.6 days recorded by Doctors Wallace Cole and Miland Knapp in patients treated by the Kenny method for the true symptoms of the disease.

During my residence in the United States I have from time to time visited the New York Orthopædic Hospital and Dispensary and have given some lectures. These lectures with the help of my book gave the staff some knowledge of my work and encouraged them to treat a certain number of control cases. The results of this experiment have been sent along to me, and the final findings agree with the report of McCarroll and

Crego with regard to the percentage of recoveries by orthodox measures and the high percentage of deformities occurring in patients treated by this method. The ultimate results of this investigation read as follows:

Estimated results of treatment:	Orthodox Treatment	Orthodox Plus Kenny	Kenny Treatment
Patients with residual paralysis (Muscle groups Fair or less)	10 (87%)	14 (58%)	8 (33%)
Number of braces needed (some patients use several)	19 braces	10 braces	6 braces
Patients needing braces or surgery:	6 (50%)	8 (33%?)	4 (16%?)
Patients with deformities:	9 (75%)	6 (25%?)	2 (8%?)
Functional Result:			
Excellent	1	6	11
Good	3	8	10
Fair	4	7	3
Poor	4	3	0

Thus it will be seen that with a poor knowledge of the Kenny method residual paralysis can be reduced from 87 per cent (which was the percentage also recorded by McCarroll and Crego) to 33 per cent, and that deformities were reduced from 75 per cent to a questionable 8 per cent—also that there were no poor results from the Kenny method of treatment.

In making this statement I am quoting the results of investigations made not by myself but by people personally unknown to me other than by a general introduction in a group. I would also again remark that no fully-trained technician in the Kenny method carried out the experiment as in the McCarroll-Crego experiment. If this had been so, the results would, no doubt, be even better, for it is recorded by all observers that in the Kenny method deformities do not materialize.

However, Dr. Krusen has remarked in his pamphlet that he has seen wasted muscles in the patients treated by the Kenny method which he claims as a deformity. If in the medical world this condition would be considered a deformity then Dr. Krusen is right. I have thought a deformity to consist of a permanent removal of part of the skeleton from its natural alignment causing a deformation. In my opinion a wasted muscle is reduced in bulk but is not taken away from its natural alignment or formation. If a fat or bulky part of the body became reduced I would not consider that a deformity, but if the skeletal alignment is out of plumb then that is a deformity—the part has been removed from its natural formation.

Many of the patients I have presented from time to time to the different groups of medical men have shown a certain amount of wasting in muscle bulk. I take great pride in these cases, for they are in the most part fully restored as far as formation is concerned and careful nursing of the affected muscle has preserved a great many segments whose control cells were damaged, and we kept the muscles receptive and with our good physiotherapy restored the brain path to these segments and gave the patient a normal limb.

I have noticed with the passage of time that the wasting disappears. A skilled person can detect the portion of the body likely to become affected by the disease—first, by muscle analysis and, second, by a certain property existing in the muscle itself; for instance, when a joint is moved the muscle whose duty it is to perform this action if affected will present the feeling of glutenous or rubber substance and will attempt to contract or shorten itself within its normal resting place. This condition in my experience precedes the spasm and pain and is the very first presentation. This condition may clear up, and no further developments may occur. The damage is apparently nil, and the patient may apparently make a complete recovery and be discharged from the hospital. Years afterwards a shortened tendon may occur or a scoliosis from an apparently unknown cause. However, this condition may not disappear and may be the prelude of pain and spasm which demands treatment immediately, for spasm is the most damaging symptom of this disease and will induce pseudo paralysis through alienation, deformities, and incoördination of muscle action.

The treatment I have evolved for this new disease is (1) prevention, if possible, of spasm occurring in the muscles presenting the conditions described above by the application of specially prepared packs which are also applied for the spasm when it does develop; (2) muscle stimulation; (3) restoration of co-ordination; (4) restoration of the brain path; (5) high grade physiotherapy evolved from a thorough knowledge of the correct classification and typing of muscles.

This procedure has never yet been presented to the medical world and is most important, for without this knowledge damage may occur.

Postgraduate Medical Education

The science of medicine is not static. Each year brings new discoveries and methods which are useful in the diagnosis and treatment of disease. The physician who has the welfare of his patients at heart will constantly strive to learn the newer and better methods. He will acquire the habit of continuing his medical education.

Some physicians have advised a discontinuance of postgraduate medical education for the duration of the war. Their reasons for this advice are: Many of our members are in the armed forces and the numbers attending will be reduced. Teachers and physicians are carrying an additional load of professional work and will have little time for postgraduate study.

Although these arguments are undoubtedly valid there are more weighty reasons why the program should be continued. Many men are now returning to the active list of practicing doctors of medicine. They will welcome the knowledge of modern medical treatment and they will be far safer physicians because of it. At the successful conclusion of the present war our professional members will expect to find the *Michigan Plan of Postgraduate Medical Education* in operation. Both the specialists and the general practitioners will seek suitable refresher courses before or soon after resuming their practice. We must not fail them.

W. H. Cummings

President, Michigan State Medical Society

President's



Page

EDITORIAL

QUOTAS FOR 1943

The final figures of Michigan Medicine's response to the call of the armed forces in 1942 was 152 per cent of quota. The roster of military members is in this number of THE JOURNAL, and totals 1885! At the County Secretaries' Conference in Lansing, January 24, Lieut. Com. M. E. Lapham, of Procurement and Assignment Service, Washington, D. C., assured us that not more than fifty or seventy-five doctors would be taken out of Michigan this year because of the very favorable record made last year. Figures have been published by several states, and their 1943 quotas announced. These are all exclusive of interns: Missouri, 254; New Jersey, 283; Pennsylvania, 1,058; California, 1,139; and New York, 3,778, of which 2,157 is a deficit for 1942. Commander Lapham said most of the calls for 1943 would come from states with large population centers. Michigan may well be proud of her record.

* * *

"GUILTY"

The Supreme Court found the American Medical Association and the Medical Society of the District of Columbia *guilty*. The officers and managers are not guilty, but the Society *is*. *Guilty* of what? The accusation was that the two societies acted in "restraint of trade." They actually were fighting for one principle, and one only, the right of the American citizen to choose his own doctor, rather than have some clinic or bureaucrat select one for him. The societies were convicted. It is wrong to attempt to provide for the free choice of physician by American citizens. Result: The societies are fined a paltry $4,000 altogether, a measure of the Court's estimate of the seriousness of the offense; and the people have lost the right to choose their own doctors. The highest court in the land says they do not have that "inalienable" right, and the Medical Societies' attempt to uphold that right is criminal.

The day after that decision, plans were announced from Washington to deduct 10 per cent from every person's pay envelope for an extended "Social Security" to cover health, maternity, unemployment and old age. This is a far-reaching scheme, now made much more feasible with a Supreme Court decision taking away from the people their right to choose their doctors. Social Security may now assign this group to Doctor A, the second group to Doctor B, and there is no alternative!

But there IS! This vast health program cannot possibly be carried out without the doctor of medicine. As individuals, the doctors were declared not guilty. They can therefore, as individuals, decide to continue the practice of medicine as before, on a free basis and at the call of their patients, not according to the whims of bureaucrats. If most of our doctors take that "stand," the Social Security plan will not be successful and people will still exercise their "right" to choose their own physician. Meanwhile, millions of voters who see another slice (10 per cent this time) taken from their pay envelope will be rather unruly when the next election comes around.

Perhaps the Supreme Court, has, in a very circumlocutory way, cleared the atmosphere.

* * *

REFUGEE PHYSICIANS

New York State has about six thousand refugee physicians practicing under her laws, according to a personal communication from a member of the State Examining Board* who is chairman of a committee studying their laws in an effort to develop more suitable requirements for licensure. He says many hundreds of these refugees have fraudulent medical diplomas, which during the war cannot be verified. Many of these men are not suited temperamentally or educationally to care for the American citizen who is ill. They simply do not fit in. He advises not to relax our medical practice laws even temporarily. We have a good provision for reciprocity, and a temporary license cannot be terminated.

*Name upon request.

Our Michigan Doctors of Medicine in Military Service



God Bless and Protect Them

Michigan Medicine is proud of its contribution to the war effort. To the armed forces, 1,885 of our Doctors of Medicine have volunteered. They are scattered throughout the world, laboring and fighting with our soldiers, sailors, marines and aviators, to ensure for us the American way of life. Our physicians in uniform have made a splendid record before and since Pearl Harbor. Their sacrifices—even to the laying down of their lives—are a dramatic personification of medical history repeating itself.

We salute these men. Every citizen of our State glories with us in their achievements for Democracy.

H. H. CUMMINGS, M.D.
President, MSMS.

Allegan

Name	Rank
Beckett, M. B.	
Brown, L. F.	
Dolfin, W. M.	

Alpena-Alcona-Presque Isle

†Foley, Arthur L.	Lt.
Kessler, Harold	Capt.
†Martinson, Donald	Lt. (S.G.)
Nesbit, W. E.	Lt.
Ramsey, J. A.	Capt.
Rutledge, S. H.	Lt.
Trudeau, John	Capt.
Wienczewski, T. W.	Lt.

Barry

Altland, J. K.	Lt. P.H.S.
Finnie, R. G.	Capt. AUS
Fisher, Gordon F.	Lt. AUS
McIntyre, Kenith S.	Lt. Comdr. USN
†Prosper, G. Bernard	Capt. AUS

Bay-Arenac-Iosco-Gladwin

Asline, J. N.	Lt.
†Burton, Horace	Capt.
Connelly, C. J.	Lt.
Dardas, Michael J.	Lt.
DeWaele, Paul	Lt.
Gronemeyer, W. H.	Lt.
Hagelshaw, G. L.	Lt. Col.
Hall, Robert F.	Lt.
Horowitz, S. Franklin	Lt.
Husted, F. Pitkin	Major
Jacoby, A. H.	Capt.
Knobloch, H. T.	Capt.
Lane, Milton	Lt.
Lerner, David	Lt.
McDonnell, W. R.	Lt.
McPhail, Joseph	Lt. (S.G.) USN
Medvesky, M. J.	Lt.
Miller, E. C.	Capt.
Moore, Neal R.	Capt.
Mosier, D. J.	Capt.
Pearson, S. M.	Capt.
Reutter, C. W.	Major
Riley, R. B.	Lt.
Shafer, H. C.	Capt.
Tarter, C. S.	Lt. Col.
Timreck, H. A.	Lt.
Woodbourne, H. L.	Capt.

★ = Died in Service.
† = Not a member of County or State Medical Society.

Berrien

Name	Rank
Bartlett, Walter M.	Major
Brown, R. J.	Lt. Comdr. USN
Crowell, Richard C.	Lt. (S.G.) USN
†Cutter, C. A.	AUS
Ellett, Wm. C.	Lt. Comdr. USN
Hershey, N. J.	AUS
†Keppen, Ford	AUS
King, Frank, Jr.	Lt. AUS
†Lane, Sidney	Lt. AUS
Leva, John B.	Capt. USA
Reagan, Robert	Lt. Comdr. USN
†Rice, Franklin	AUS
Ruth, J. G.	Capt.
†Sonneman, C. O.	Lt. AUS
Sowers, Bouton	Lt. Comdr. USN
Strayer, J. C.	Lt.
†Woodford, Hackley	Lt. AUS

Branch

Chipman, E. M.	Capt. AUS
Fraser, R. J.	Lt. AUS
Joerin, William	Lt. AUS
Meier, H. J.	Capt. AUS
Olmsted, Kenneth L.	Capt. AUS
Scovill, H. A.	Capt. AUS
Smith, L. L.	Capt. AUS
Weidner, H. R.	Lt. Comdr. USN

Calhoun

Amos, Norman H.	Lt. Comdr. USN
Becker, H. F.	Major AUS
Bonifer, Philip P.	Lt. (S.G.) USN
Brainard, C. W.	Lt. Comdr. USN
Braham, W. G.	Lt. AUS
Campbell, R. J.	Lt. (S.G.) USN
Capron, Manley J.	Comdr. USN
Chynoweth, W. R.	Major AUS
Curless, Grant R.	Capt. AUS
Curry, Robert K.	Lt. AUS
Dodge, W. M., Jr.	Major AUS
Finch, D. L.	Lt. USN
Forsythe, James	Lt. AUS
Graubner, F. L.	Lt. AUS
★Hale, C. E.	Capt. Killed in action
Hansen, Harvey C.	Lt. AUS
Hubly, James W.	Capt. AUS
Humphrey, Arthur	Lt. Comdr. USN
Jones, T. K.	Capt. AUS
Keagle, Leland	Lt. (S.G.) USN
Kinde, M. R.,	Major AUS
Kingsley, Paul C.	Capt. AUS
LaFrance, Francis	Lt. AUS
Levy, Joseph	Capt. AUS
Lowe, Kenneth	Lt. Comdr. USN
Lowe, Stanley	Capt. AUS
Meister, F.	Major AUS
Morrison, D. B.	Capt. AUS
Mullenmeister, Hugh F.	Major AUS
Norton, Richard	Major AUS
Patterson, Adonis	Capt. AUS
Royer, Clark W.	Lt. AUS
Simpson, Robert	Capt. AUS
Slagle, George W.	Lt. (S.G. USN)
Sleight, James D.	Capt. AUS
Smith, T. C.	Capt. Can. Army
Stadle, W. H.	Lt. Comdr. USN
Taylor, Clarence B.	Capt. AUS
Watson, B. A.	Major AUS
Zinn, Karl	Capt. AUS
†Alpiner, Sam	Lt. AUS
†Clark, Eugene	Lt. AUS
†Fallis, R. E.	Lt. AUS
†Hoyt, A. W.	Lt. AUS
†Kellher, George	Lt. AUS
†Lam, Francis L.	Lt. AUS
†Peggs, Harold	Lt. AUS
†Prachar, Geo. A.	Lt. AUS
†Stewart, C. J.	Lt. AUS
★†Shick, W. H.	Lt. Killed in action
†Wakeman, Everal	Lt. AUS
†Penzlar, Meyer	Lt. AUS
†Hamilton, Lawrence E.	

Cass

Clary, R. I.	Lt. (S.G.) USN
Hickman, John K.	Capt. AUS
Rice, F. G.	Capt. AUS

Chippewa-Mackinac

Birch, William G.	Capt. AUS
Blair, Herbert M.	Lt. AUS
Cowan, Donald A.	Capt. AUS
Gilfillan, E. O.	1st Lt. AUS
Hakala, L. J.	USPH
Mertaugh, William F.	Capt. AUS
Wallen, L. J.	AUS
Blain, James F.	Lieut. Comdr. USN

Clinton

Hart, Dean W.	Lt. Comdr. USN
†Richards, Frank D.	
Russell, S. R.	Major
†Slagh, E. M.	
†Steiner, M.	
Wahl, George E.	Lt.

Delta

Brenner, E. J.	Capt.
Clausen, Claire H.	Capt.
Fyvie, James H.	Lt.
LeMire, Wm. A.	Lt.
McNierney, Thomas	Lt.

Dickinson-Iron

Name	Rank
Browning, James L.	Capt. AUS
Gloss, Kenneth E.	Capt. AUS
Haight, Harry H.	Lt. USMC
McEacheran, Hugh D.	Capt. AUS
Rettallack, R. C.	Lt. AUS

Eaton

Brown, B. P.	Capt.
Carothers, Daniel J.	Lt.
Goff, Sidney	Capt.
Huyck, Stanhope P.	Capt.
Imthun, Edgar	Capt.
Sevener, Clinton J.	Capt.
Van Ark, Bert	Capt.

Genesee

Adams, Chester H.	Capt.
Andrews, Nelson A.	Capt.
Anthony, George E.	Capt.
†Baker, Henry K.	Lt.
Bald, F. W.	Lt. Comdr. USN
Bateman, Lawrence G.	Lt.
Burnside, Howard	Capt.
Bernstein, Eli	Lt.
Beyer, Damon P.	Lt.
Bradley, Robert	Capt.
†Bradford, Ferd.	Lt.
Bruce, William W.	Lt.
Colwell, Clifford W.	Major
Conover, George V.	Lt. Comdr. USN
†Cox, T. Jefferson	Lt.
Drewyer, Glenn E.	Lt. (S.G.) USN
Eickhorst, Thomas	Lt. (S.G.) USN
Farhat, Maynard	Capt.
Flynn, Southard T.	Major
Finkelstein, Theodore	Lt.
Fuller, Harvey T.	Capt.
Gelenger, Stephen M.	Capt.
Gorne, Saul S.	Lt.
Gray, Edwin F.	Capt.
Gutow, Julius J.	Lt.
Hague, Robert F.	
Hays, George A.	Lt. USPHS
Hiscock, Harold H.	Lt. Comdr. USN
Hubbard, William B.	Major
Johnson, Frank D.	Major
Kaleta, Edward	Lt.
Kaufman, Lewis D.	Lt.
Lambert, Leslie A.	Capt.
McArthur, Loren E.	Lt.
Rieth, George	Lt.
†Rowe, John	Lt. (S.G.) USN
Rundles, Walter Z.	Capt.
Sandy, Kenneth R.	Lt.
†Sartori, Max	Lt.
Scavarda, Charles J.	Capt.
Schiff, Benton A.	Lt.
Smith, Maurice J.	Lt.
Sniderman, Benjamin F.	Capt.
Snyder, Charles E.	Capt.
†Sorkin, Maurice S.	Lt.
Sorkin, Samuel S.	Lt.
Steinman, Floyd H.	Major
Tofteland, Elmer H.	Lt.
VanGorder, George F.	Capt.
Vary, Edwin P.	Lt. Comdr. USN
Walcott, Carver G.	Lt. (S,G.) USN
†Ward, Ivan W.	Lt.
White, Carl	Lt. Comdr. USN
Willoughby, Gordon L.	Capt.
Woughter, Harold	Lt.

Gogebic

Gullickson, M. J.	Lt.
Pinkerton, H. A.	Lt. Comdr. USN
★Reid, J. D.	Lt.
	(deceased Oct. 23, 1942)

Grand Traverse-Leelanau-Benzie

Baumann, Milton C.	USA
Brownson, Kneale M.	USA
†Green, Richard	USA
Hamilton, Earl E.	AUS
Huene, Nevin	USA
Knapp, Joseph L.	USA
Lemen, Charles E.	USA
Lentz, Robert J.	USA
Trautman, Frederick B.	USA
Way, Lewis R.	USA
Zielke, I. H.	USA

Gratiot-Isabella-Clare

Barstow, Don	Lt. AUS
Dale, E. C.	Lt. AUS
Davis, L. L.	Capt. AUS
Graham, B. J.	Lt. USN
Hammerburg, K.	Capt. AUS
Hersee, W. E.	1st Lt. AUS
Miller, S. W.	Lt. AUS
Oldham, E. S.	Lt. USN
Rottschafer, J. L.	Lt. USN
Slattery, F. G.	Lt. (S.G.) USN
Wolfe, Kenneth P.	Capt. AUS
Wood, C. R.	1st Lt. AUS

Hillsdale

Johnson, Clare	Capt. AUS
Kinzel, R. W.	Capt. AUS
Mattson, H. F.	Capt. AUS
Sandor, A. A.	Lt. AUS
Sawyer, Walter W.	Lt. (S.G.) USN
Strom, A. W.	Lt. (S.G.) USN

Houghton-Baraga-Keweenaw

Acocks, James R.	Lt.
Aldrich, Leonard C.	
Kadin, Maurice	
Kolb, F. E.	
Pleune, R. E.	
Roche, A. M.	
Tinetti, E. F.	

Ingham

Black, Charles	
Brown, F. M.	Lt.
Burhans, Robert	Lt. Comdr. USN
Clark, William E.	Lt.
Clinton, George	Lt.
Doyle, Charles R.	
Drolette, Donald	Lt.
Drolette, Lawrence A.	
Fisher, Dan W.	Major
Gibson, Thomas E.	
Goldner, Roy	Capt.
Harris, Herbert	Major
Harrold, J. Freeman	Capt.
Heald, Gordon	Lt.
Hendron, O. H.	Capt.
Himmelberger, R. J.	Capt.
Hodges, Kenneth	Lt. (S.G.) USN
Hughes, Harold A.	Lt. (J.G.) USN
Kelly, William H.	Capt.
Lang, Rudolph	USPHS
LeDuc, Don M.	Lt. Comdr. USN
McGillicuddy, R. J.	Capt.
Ley, W.	Lt.
Meade, Wm.	Capt.
Mercer, W. A.	Capt.
Morrow, Robt.	Lt.
Potter, Earl	Lt.
Molnar, Stephen	Lt.
Richards, F.	Capt.
Rozan, Milton M.	Lt. Comdr. USN
Sander, John F.	Lt. Comdr. USN
Silverman, Irving E.	Lt.
Spencer, P. C.	Lt. (S.G.) USN
Steiner, A. A.	Lt.
Stiles, Frank	Lt. Comdr. USN
Sullivan, Ralph	Lt.
Swartz, Frederick C.	
Tamblyn, F. Wendell	Lt. Comdr. USN
Toothaker, Kenneth	
Troost, F. M.	
VanderZalm, T. P.	
Webb, Roy O.	
Wellman, John	

Ionia-Montcalm

Benison, A. L.	
Dunkin, Lloyd S.	
Hansen, Carl M.	
Kling, V. F.	
LaVictoire, I. N.	
Marston, Leo L.	
Mintz, Morris J.	
Slagh, Milton E.	
Van Loo, J.	

Jackson

Ahronheim, J. H.	Capt.
Appel, Saul	Lt.
Bartholic, Francis W.	Capt.
Cawley, Edward P.	Capt.
Crowley, Edward D.	Lt. Comdr. USN
Edmonds, John M.	Capt.
†Finton, Max.	Lt. (J.G.) USN
Finton, Walter F.	Lt.
Gordon, Donald L.	Lt. (J.G.) USN
Greenbaum, Harry	Lt.
Hanna, Roger J.	Major
Holst, John B.	Lt.
LaVictoire, I. N.	Lt. (S.G.) USN
Lake, Edward C.	Lt.
Lenz, Charles R.	Lt.
Ludwick, John E.	Lt. Comdr. USN
McLauthlin, Herbert B.	Lt.
†Meade, Robert	Lt.
Miller, Jack L.	Lt.
Murphy, Bernard M.	Major
Otis, Grant L.	Lt.
†Ottoman, Richard	Lt.
Scott, John A.	Capt.
Seybold, Edward G.	Lt.
Sirhal, Alfred M.	Lt.
Southwick, W. A.	Lt.
Sugar, Sam	Capt.
Susskind, Myron V.	Capt.
Tate, Cecil E.	Lt.
Van Wagnen, Frederick I.	Lt.
Vivirski, Edward E.	Lt.
†Walder, Harold	Lt.
Wickham, Woodward A.	Lt. (S.G.) USN

Kalamazoo

Aach, Hugo	Major AUS
Andrews, Sherman E.	Major AUS
Bennett, Keith	Major AUS
Borgman, Wallace	Lt. AUS
Crane, W. Bartlett	Capt AUS
Crawford, Kenneth	Capt. AUS
Dowd, Bennard	Lt. AUS
Doyle, F. M.	Capt. AUS
Fopeano, John	Major AUS
Fuller, Paul M.	Major AUS
Gilding, Joseph P.	Lt. AUS
Hodgman, Albert B.	Capt. AUS
Holder, Charles	Lt. AUS
Irwin, William D.	Capt. AUS
†Iseman, Joseph W.	Capt. AUS
Jackson, Howard	Lt. USN
Kavanaugh, William R.	Lt. AUS
Klerk, William J.	Lt. AUS
Koestner, Paul A.	Capt. AUS
Kuhs, Milton Y.	Lt. AUS
MacGregor, John R.	Capt. AUS
Machim, Harold A.	Lt. AUS
Malone, James G.	Capt. AUS
McIntyre, Charles H.	Lt. USN
Marshall, Don	Major AUS
Moe, Carl Rex	Lt. USN
Nell, Edward R.	Lt. AUS
Okun, Milton	Lt. AUS
Osborne, Charles E.	Lt. AUS
Patmos, Martin	Major AUS
Peelen, J. William	Capt. AUS
Peelen, Matthew	Major AUS
Rigterink, Gerald	Capt. AUS
Ryan, Frederick C.	Lt. USA
Schrier, Clarence M.	Capt. AUS
Schrier, Paul G.	Lt. Comdr. USN
Schrier, Thomas	Capt. AUS
Scott, W. A.	Major AUS
Shook, Ralph	Capt. AUS
Siemsen, William J.	Major AUS
Sofen, M. B.	Lt. AUS
Southworth, Maynard	Lt. AUS
TenHouten, Charles	Capt. AUS
VerHage, Martin D.	Lt. AUS
Volderauer, John	Capt. AUS
Wagar, Carl A.	Lt. AUS
Wagenaar, E. H.	Capt. AUS

Kent

Adams, Frank	Lt. USN
Aitken, George T.	Capt. AUS
Alfenito, Felix	Capt. AUS
Balyeat, Gordon	Lt. USN
Batts, Martin	Capt. AUS
Beaton, James H.	Lt. USN
Beeman, C. B.	Capt. AUS
Beets, W. Clarence	Capt. AUS
Bell, C. M.	Lt. AUS
Bettison, William	Major AUS
Boelkins, Richard C.	Lt. AUS
Boet, John T.	Major AUS
Brace, Fred C.	Lt. AUS
Brink, J. Russell	Lt. USN
Buesing, Oliver R.	Lt. AUS
Carpenter, Luther C.	Capt. AUS
Chadwick, Ward	Capt. U.S.PHS
Collisi, Harrison S.	Major AUS
Colvin, W. G.	Capt. AUS
Cosgrove, William	Capt. AUS
Crane, Harold	Lt. Comdr. USN

Kent (Continued)

Name	Rank
Damstra, Harold	Capt. AUS
Davis, David B.	Major AUS
†DeBoer, Clarence	Lt. AUS
DeBoer, Guy W.	Capt. AUS
DeVel, Leon	Major AUS
Dick, Mark W.	Capt. AUS
Dickstein, Bernard	Lt. AUS
Eaton, Robert	Capt. AUS
Failing, J. Fletcher	Capt. AUS
Farber, Charles	Capt. AUS
Fellows, Kenneth E.	Capt. AUS
Ferguson, James A.	Lt. AUS
Ferrand, Louis	Lt. AUS
Fitts, Ralph	Capt. AUS
Flynn, J. Donald	Lt. USN
Frantz, Charles	Major AUS
Freyling, Robert A.	Lt. USN
Griffith, Lucian S.	Major AUS
Haeck, William	Lt. AUS
Hill, Morgan A.	Major AUS
Hilt, Lawrence	Comdr. USN
Holdsworth, Moses	Capt. AUS
Hollander, Stephan	Capt. AUS
Hoogerhyde, Jack	Lt. Comdr. USN
Ingersoll, Charles F.	Major AUS
Jameson, Fred	Lt. AUS
Kelly, Robert	Lt. USN
Klaus, C. D.	Lt. USN
Kniskern, Paul	Capt. AUS
Koontz, E. R.	Capt. AUS
Lentini, Joseph R.	Capt. AUS
McKenna, J. L.	Capt. AUS
MacDonald, Allen	Lt. AUS
Marrin, M. M.	Lt. Col. AUS
Miller, J. D.	Lt. Comdr. USN
Mitchell, H. S.	Major AUS
Moleski, Leo T.	Lt. AUS
Mouw, Dick	Lt. AUS
Murphy, Miles	Capt. AUS
Nelson, Algot R.	Major AUS
Payne, C. Allen	Capt. AUS
Pott, A. L.	Capt. AUS
Ralph, L. Paul	Lt. Comdr. USN
Rogalski, Floyd	Lt. AUS
Roth, Emil	Lt. AUS
Schuitema, Donald	Capt. AUS
Scully, Raymond E.	Capt. AUS
Shellman, Millard W.	Lt. USN
Sluyter, Stanley L.	Lt. AUS
Steffenson, Wallace	Capt. AUS
Stover, Virgil	Capt. AUS
Swenson, H. C.	Lt. AUS
Tesseine, Arthur	Lt. AUS
VanderMeer, Ray	Lt. AUS
Van Solkema, Arthur	Capt. AUS
†Van't Hof, Albert	Lt. AUS
†Warmenhoven, Simon	Lt. Col. AUS
Webber, Jerome E.	Lt. USN
Whalen, John M.	Lt. Comdr. USN
Woodburne, Arthur R.	Major AUS
†Wurz, John	Major AUS
†Yared, Jerome	Lt. USN

Lapeer

Dorland, Clark	Capt. AUS
Jackson, C. C.	Capt. AUS
McBride, John R.	Capt. AUS

Lenawee

Beebe, I. J.	Lt. AUS
Campbell, C. A.	Capt. AUS
Claxton, W. T.	Capt. AUS
Hall, George C.	Major AUS
Hammel, H. H.	Col. AUS
Helzerman, Ralph	Lt. AUS
Hinshaw, W. V.	Capt. AUS
Iler, H. D.	Lt. AUS
McCue, F. J., Jr.	Lt. USN
McGarvey, M. R.	Capt. AUS
Miller, Perry Lynford	Major AUS
Pasternacki, Arthur	Capt. AUS
Patmos, Bernard	Capt. AUS
Rawson, A. P.	Capt. AUS
Rogers, John D.	Capt. AUS
Wynn, George H.	Capt. AUS

Livingston

Cameron, D. A.	Capt.
Hayner, R. A.	Capt.
Hill, H. C.	Lt.
Leslie, L.	Major
Stephens, D. C.	Lt. Comdr.

Luce

Lance, Paul E.	Major AUS
Surrell, Matthew	Capt. AUS
Swanson, George F.	Major AUS

Macomb

Name	Rank
Deurloo, H. W.	Capt. AUS
Dudzinski, Edmund J.	Lt. (S.G.) USN
Huminski, G. S.	Lt. AUS
†Klein, William A.	Lt. AUS
†Lance, Paul E.	Major AUS
Maguire, Andrew J.	Lt. (S.G.) USN
†Mattes, Max	Lt.
†Moran, F. T.	Capt. AUS
Mulligan, Phillip G.	Capt. AUS
Reichman, Joseph J.	Lt. AUS
Rivard, Charles L.	Capt. AUS
Roth, George E.	Lt. (J.G.) USN
†Rosenthal, S. A.	Capt. AUS
Rothman, Arthur M.	Capt. AUS
Salot, Russell F.	Lt. Comdr. USN
Scher, J. W.	Capt. AUS
†Stein, S. C.	Lt. AUS
†Sylvan, Melvin M.	Lt. AUS
Wellard, Henry C.	Major AUS

Manistee

Hansen, Ernest C.	Lt. Comdr. USN
Konopa, John F.	Capt. AUS
Ogilvie, Gordon D.	Lt. AUS

Marquette-Alger

†Bennett, Matthew	Capt.
Bertucci, Joseph	Capt. AUS
†Bryce, James	Capt.
Fennig, Foster	Capt. AUS
Hanelin, H. A.	Lt. AUS
Hornbogen, D. P.	Lt. Comdr. USN
Janes, Grant	Capt. AUS
Lambert, Warren	Capt. AUS
Nicholson, John	Capt. AUS
Niemi, Osmo I.	Capt. AUS
Schutz, W. J.	

Mason

Comodo, Nicholas M.	Capt. AUS
Hoffman, Howard B.	Capt. AUS
Ostrander, Robert A.	Lt. AUS

Mecosta-Osceola-Lake

Ivkovich, Paul	Lt. AUS
Klein, J. Paul	Lt. AUS
Phillips, R. W.	Lt.

Medical Society of North Central Counties

Lanting, Roelof	Capt.
McDowell, Douglas	Lt.

Menominee

Heidenreich, John R.	Major
Sethney, Walter	Capt.
Dewane, T. F.	Lt.

Midland

Meisel, Edward	Lt.
Jon Haitinger, Kalmon	Lt.

Monroe

Barker, Vincent L.	Lt. Comdr. USN
Cohen, H. Herbert	Lt. AUS
Denman, Dean C.	Lt. Comdr. USN
Flanders, J. P.	Lt. AUS
Goodman, Louis	Capt. AUS
Hunter, Marion A.	Capt. AUS
Long, Edgar C.	Major AUS
Pengotti, S. C.	Lt. AUS
Reisig, A. H.	Lt. AUS
Stolpestad, C. T.	Capt. AUS
Williams, Robert J.	Lt. Comdr. USN
Lindquist, Paul	USPHS

Muskegon

Benedict, Arthur L., Jr.	1st Lt. AUS
†Cohlan, Wilson R.	Lt.
Dasler, Adolph F.	Lt. USN
Derezinski, Clement	Lt. USNR
Diskin, Frank	Capt. AUS
Douglas, Robert J.	Capt. AUS
Fleishman, Norman A.	1st Lt. AUS
Gillard, James L.	Lt. USN
Griffith, Robert A.	1st Lt. AUS
Hartwell, Shattuck W.	Capt. AUS
Holmes, Roy Herbert	Major AUS
Kane, Thomas J.	1st Lt. AUS
Kerr, Howard J.	Capt. AUS
LeFevre, Louis	Lt. Col. AUS
Meengs, Marvin B.	1st Lt. AUS
Miller, Phillip	Capt. AUS
Morse, Bertram W.	Capt. AUS
Price, Leonard	1st Lt. AUS
Risk, Robert D.	1st Lt. AUS
Schollé, Norman W.	1st Lt. AUS
†Williams, Eugene	Lt. AUS

Newaygo

Geerlings, Lewis	Lt.
Gordon, B. F.	Lt.

Northern Michigan Medical Society

Conway, William S.	Capt. AUS
Giffords, Mark	1st Lt. AUS
Miller, Samuel L.	Capt. AUS
Winter, Joseph A.	1st Lt. AUS
Lilga, Harris V.	Capt. AUS
Lentini, Nicholas	1st Lt. AUS

Oakland

Abbott, Vernon C.	
Benning, C. H.	
Boucher, Roman E.	
Christie, J. W.	
Cooper, Robert J.	
Dobski, E. J.	
Faulconer, Albert	
Flick, Earl J.	
Furlong, Harold A.	Lt. Col.
Gatley, C. R.	
Gill, Matthew J.	
Hammer, Carl W.	
Hammonds, Everett E.	
Hassberger, J. B.	
Hoyt, D. F.	
Hubert, John R.	
Kukuk, M. R.	Lt
Lambert, A. C.	
Lass, Edward H.	
Little, James W.	
McEvoy, F. J.	
MacKenzie, O. R.	
Markley, John M.	
Mason, Robert J.	
Morrell, William B.	Lt.
†Mocsman, B. A.	Lt.
Needle, Francis H.	
Nosanchuck, Joseph	
Olmacher, E. P.	
Olson, Richard E.	
Osgood, S. W.	
Pauli, T. H.	
Pelletier, Charles J.	
Porritt, Ross J.	
Ports, Preston W.	
Russell, Vincent P.	
†Schlecte, Edwin Carl	Lt.
Schoenfeld, John B.	
Schuneman, Howard	
Shadley, M. L.	Capt.
Smith, Carlton A.	
†Spencer, Floyd E.	
Spoehr, Eugene L.	
Spohn, Earl W.	
Stanley, Arthur	
Stolpman, A. K.	
Terry, Stewart	
Wagley, Perry V.	Capt.
Watson, Thomas	
Wentz, Arthur J.	

Oceana

Flint, Charles	Capt. AUS
Lemke, Walter	Lt. USN
Robinson, W. Gordon	Lt. AUS

Ontonagon

Rubinfeld, S. H.	

Ottawa

Clark, Nelson	
Cook, Carl	
De Young, Fred	
Hager, Ralph	

Ottawa (Continued)

Name	Rank
Harms, H. P.	
Rypkema, William	
Timmerman, E. C.	
Wells, Kenneth	

Saginaw

Bishop, Mortimer H.	
Butler, Milton G.	
Chisena, Peter R.	
Cortopassi, Vital E.	
Cory, Charles W.	
Curts, James H.	
Frantz, Charles H.	Major
Gerber, Herbert	
Grigg, Arthur P.	
Hand, Eugene	
Imerman, Harold	
James, John W.	
Kerr, William	
Lurie, Robert	
Luger, Fred	
MacMeekin, James W.	
Mauer, John A.	
Morgrette, L. J.	
Mudd, Richard	
Murray, Charles R.	
Phillips, Homer A.	
Podvin, Clifford	
Richards, Ned W.	
Richter, Harry J.	
Sargent, Donald V.	
Schneider, A.	
Schultz, Frank	
Sheldon, Suel A.	
Skowronski, Casimer A.	
Slack, Walter K.	
Stander, Carl A.	
Stewart, George William	
Thompson, Arthur B.	
Tiedke, Gunther E.	
Wallace, Herbert C.	
Yntema, Stuart	

Sanilac

Koch, Donald	Lt.
Norgaard, Hal	Capt.

Shiawasse

Backe, John C.	Capt.
Brandel, John M.	Lt.
Brown, Richard J.	Lt.
Buzzard, Walter D.	Lt.
Janci, Julius S.	Lt.
Kaufman, H. J.	Lt.
Linden, V. E.	Lt.
McKnight, Edwin R.	Capt.
Shepherd, Walter F.	Capt.
Slagh, E. M.	Lt.
Wilcox, C. M.	Capt.

St. Clair

Bigger, Robert J.	Lt. (S.G.)
Clyne, Benjamin C.	Capt.
†Kirker, F. O.	Capt.
LeGalley, Kenneth B.	Capt.
Licker, Rueben R.	Lt.
Ludwig, Frederick A.	Lt. (S.G.)
Witter, G. L.	Capt.
†Woods, Gordon L.	Capt.

St. Joseph

Berg, L. A.	Lt. USN
Buell, M. F.	USPHS
Fiegel, S. Albert	Lt. USN
Hoekman, Aben	Capt. AUS
Holm, A. G.	Lt. AUS
Raisch, Frederick J.	Lt. AUS
Rice, John Wesley	Lt. USN
Shaw, George D.	Capt.
Sheldon, John	Lt.
Zimont, R. D.	Lt.

Tuscola

Fisher, R. E.	
Gugino, Frank J.	
Hoffman, T. E.	
Vail, H. E.	

Van Buren

Gano, Avison	Lt. AUS
Giddings, Ralph R.	Capt. AUS
Hall, Edward J.	Capt. AUS
Hasty, Willis Arthur	Lt. AUS
Iseman, J. W.	Capt. AUS
Terwilliger, Edwin	Major AUS
Diephus, Bert	Capt. AUS
Ten Houten, Chas.	Capt. AUS

Washtenaw

Agate, George H.	
Armstrong, Richard C.	1st Lt.
†Avery, Noyes L.	
†Baer, Louis S.	Lt.
Barnes, Allan C.	Capt.
†Bauer, Gerhard H.	
Blair, Thomas H.	
†Block, Malcolm	Lt.
†Browns, Hershall L.	
†Bryan, John A.	
†Bullington, Bert M.	
Bulmer, Dan J.	Major
Buscaglia, C. J.	Lt.
†Butler, William	
†Byrn, Robert W.	Capt.
†Cochran, William L.	Lt.
Conger, Kyril B.	Capt.
†Cook, Eugene L.	Lt.
Cooper, Ralph R.	Capt.
†Courville, Charles G.	Capt.
Crabtree, Peter	Capt.
†Craig, James B.	Capt.
†Craig, William R.	Lt.
Davis, Fenimore E.	Major
Day, A. Jackson	Lt.
†Denham, Robert	
†Diamond, Barnard L.	
†Douglas, James B.	Lt.
Dowman, Charles E.	
†Due, Floyd O.	Lt.
Duff, Ivan F.	
Farrior, J. Brown	Capt.
†Ferber, Leon	
†Fink, Myron	Lt.
Fitzgerald, Thomas D.	Capt.
†French, H. A.	
†Frohlich, Moses M.	Major
†Fuller, William C.	Lt.
Gardiner, Sprague	Capt.
†Gass, H. Harvey	Lt.
†Goldhamer, S. M.	Major
Green, Mervin E.	Lt.
†Gustafson, Jack R.	Lt.
Hagerman, George W.	Capt.
Hammond, George	Major
High, Howard C., Jr.	
†Hirschfeld, Alexander	Lt.
†Houston, William	
Howes, Homer A.	Capt.
†Hunt, H. H.	
†Jackson, Raymond S.	Lt.
†Jackson, Richard G.	Lt.
†Jackson, Robert T.	Lt.
†Jennings, Hal B.	Lt.
Johnson, L. J.	Lt. Comdr.
†Joistead, Arthur H.	Capt.
†Jones, Ellis	Lt.
Jordan, Paul H.	
Kahn, Edgar A.	Lt. Col.
Keller, Arthur P.	Capt.
†Kiehn, Clifford L.	Capt.
†Kimbrough, Robert C.	
†King, Walter	
†Lapides, Jack	Lt.
Levin, Manuel	
†List, Martin L.	Lt.
†Little, Sam C.	Lt.
†Locklin, W. Kaye	
Lowell, Vivion F.	Capt.
†Lusk, Harry A.	Lt.
MacIntyre, Dugald S.	
†MacLean, Kenneth F.	Lt.
†Maddock, Walter G.	Col.
†Marks, Frederick	
†Marshall, John S.	Lt.
Miller, Harold V.	Capt.
†Mills, Richard W.	Lt.
†Mollin, Edwin	Lt.
Moore, Donald Floyd	Lt.
†Muehlig, G. Kenneth	Lt.
†Mueller, Robert J.	Lt.
†Mundt, Leslie	
†Musselman, Merle	
†Nunnemaker, John C.	Capt.
†Oliver, Richard	Lt.
†Pederson, Svend	
Power, Frank H.	Lt.
†Quarton, Albert E.	
Rague, Paul O.	
†Reiff, William H.	Lt.
Reynolds, Stephen	Lt.
†Rowe, Peter	
†Runge, Paul W.	
†Russell, Stuart W.	Lt.
†Sachs, Allen E.	
†Saunders, Allen	Lt.
†Schopp, Alvin	
Scott, Robert Redvers	
Scott, William C.	Lt.
Scurry, Maurice McL.	Lt.
†Sheldon, John M.	Major
†Singleton, Albert O.	Lt.
†Slaughter, John C.	
†Sludder, Gerald A.	
Smith, Joseph G.	
†Snyder, Robert D.	Capt.
†Steffe, Ralph S.	Lt.
†Stevens, Harold	Lt.
†Stewart, Wayne H.	Lt.
†Strayer, John W.	Lt.
†Sweet, Robert B.	
Teed, Wallace R.	Lt. Comdr.
Thieme, E. Thurston	Capt.
†Thirlby, Richard L.	Lt.
†Thomson, Daniel C.	
†Thomson, John W.	
Towsley, Harry A.	Major
†Uphold, Henry	
Waldron, Alexander M.	
†Weeks, William F.	Lt.
†Whitaker, Spires	
Wile, Udo J.	Col. USPHS
†Wilkinson, Charles F.	
†Wilson, Claude D.	Lt.
†Windrow, Frank M.	Capt.
†Wright, Edwin M.	Lt.

Wayne

Abruzzo, Anthony M.	Capt.
Adelson, Sidney L.	
Adler, Sidney	
Agin, Lamber J.	
Albert, Samuel	
Aldrich, Napier S.	Lt. Comdr. USN
Ale, Thompson	
Alexander, Martin M.	
Alm, Bernard T.	
Alper, Louis	
Altshuler, Samuel S.	Major
Anderson, John Wm.	
Anderson, Gordon H.	Lt.
Anderson, R. F.	Lt.
Anderson, Walter L.	Capt.
Andre, Harvey	
Andrews, Raymond M., Jr.	
Angell, Howard H.	
Appelman, H. B.	
Arminski, Thomas C.	
Arms, A. V.	
Armstrong, John Wm.	
Ascher, Meyer S.	
Ashley, L. Byron	Lt. Col.
Askwig, Leroy C.	
Asselin, Dean R.	
Asselin, Regis F.	Lt.
Atler, Leroy	Lt.
Babcock, Kenneth B.	
Bader, B. H.	
Bailey, Carl C.	Capt.
Bailey, John H.	
Bailey, Wm. J.	Lt.
Bagley, Harry E.	Capt.
Baker, Wm. S., Jr.	
Balbero, Harry	
Barak, Lewis R.	
Barenholtz, Benjamin	
Barnett, Louis L.	Capt.
Barr, Edward	
Barron, James	
Bates, Gaylord S.	Lt. Comdr. USN
Bauer, B. J.	Lt.
Bauer, L. E.	Lt. Comdr. USN
Baumer, Moe	Capt.
Bausch, Richard Geo.	
Beaton, Colin	
Beame, A. Duane	Lt.
Beck, Karl Henry	
Becker, Abraham	Capt.
Beckwitt, Morris C.	Capt.
Beer, Joseph F.	Lt.
Beer, John	Lt.
Beers, Morrison D.	
Beeuwkes, L. E.	Capt.
Belanger, Ernest	Lt.
Belanger, Wm. Geo.	
Beitman, Max Richard	Lt.
Belisle, John A.	
Belknap, Warren	
Bennett, Sanford Alvin	
Benson, Clifford D.	Lt. Comdr. USN
Benson, Davis A.	Lt.
Benzing, Wm. M., Jr.	
Beresh, Louis	
Bergman, Theodore I.	Capt.
Bergo, Howard L.	
Berkow, Kenneth A.	
Berlien, Ivan C.	

Wayne (Continued)

Name	Rank
Bermel, John	
Berman, Sidney	Lt. Comdr. USN
Bernstein, Samuel S.	Capt.
Berry, Robt. E. L.	
Besancon, J. H.	Lt. Comdr. USN
Best, John Wm.	
Bertucci, Robt. Joseph	
Bicknell, Edgar A.	
Bicknell, Frank B.	Capt.
Biery, Martin Luther	
Binkley, Edward L.	
Birch, John R.	Capt.
Birndorf, Leonard	
Black ,Franklin R.	
Blake, Henry S.	
Blashill, James B.	Capt.
Blodgett, Wm. H.	
Boccaccio, John	Lt.
Boccia, James J.	Capt.
Bohn, Stephen S.	Lt. (S.G.) USN
Boileau, Thornton I.	
Boles, A. E.	Lt.
Bookstein, Abraham M.	Lt.
Bott, Edmund Thomas	
Bovill, E. G.	Lt. Comdr. USN
Boyd, John C.	
Bradford, Henry A.	Lt.
Bradley, George T.	
Brancheau, L. T.	
Braun, Lionel	Capt.
Brines, Osborne A.	Lt. Comdr. USN
Bringard, E. L.	Capt.
Britton, George T.	
Brooks, Charles W.	Lt.
Brooks, Mason	
Brough, Glenn A.	
Brown, Andrew G.	
Brown, Carlton F.	Capt.
Brown, John R.	Lt.
Brown, Marion George	
Brown, Robt. W.	
Brownell, Paul G.	
Bruer, Edwin Louis	
Bryan, Donald I.	
Bryce, John	Lt. Comdr. USN
Buchner, Harold W.	Capt.
Burgess, Woodrow W.	
Burroughs, Rosswell G.	
Burstein, Morris M.	
Burnstine, Perry P.	
Bush, Glendon J.	
Butler, Frank L.	
Buttrum, Edward J.	Lt.
Caldwell, J. Ewart	Major
Callaghan, Thomas T.	Major
Campbell, Charles A.	
Campbell, Mac D.	
Campbell, William J.	
Caplan, Leslie	
Caraway, James E.	Capt.
Carnes, Harry E.	Lt.
Carp, Joseph	Lt.
Carpenter, William Sprague	
Carron, Harold	
Carstens, Henry R.	Col.
Carstenson, Vincent H.	
Carter, Harold G.	
Cathcart, Edward A.	Lt. Comdr. USN
Caumartin, Hugh	
Caughey, Edgar H.	Lt.
Cavell, Roscoe	
Chapnick, H. A.	Capt.
Chason, Jacob L.	
Chesluk, Herman M.	
Childs, George M.	Capt.
Chittenden, George E.	Major
Christensen, Robert C.	
Chudnoff, Jack S.	
Cigany, Zoltan B.	
Clark, Benjamin W.	Lt. Comdr. USN
Clark, James Y.	
Clarke, Niles A.	
Clifford, John E.	Capt.
Clifford, Robert P.	
Clifford, Thomas P.	Lt. Comdr. USN
Cohn, Daniel E.	Capt.
Cole, Wyman C. C.	
Collins, Arthur D.	Capt.
Conn, Harold	Lt.
Conn, Raymond W.	Lt.
Conrad, C. D.	
Conrad, Maynard M.	
Cook, James A.	
Cook, James C.	
Cooksey, Warren B.	Major
Cooley, John B.	
Cooper, Benjamin F.	
Corrigan, Edmund	
Coucke, Henry O.	Lt.
Cowan, John S.	
Cowley, Leonard L.	
Crane, Thomas P.	
Cretsinger, Francis C.	Lt.
Crews, Thomas H.	
Croll, Leo J.	Capt.
Croll, Maurice	
Cross, Kenneth R.	
Croushore, James E.	
Crowley, Robert T.	
Culp, Ormand S.	Capt.
Culver, Dean T.	
Cummings, Kenneth L.	
Czeresko, Anthony R.	
Dale, Mark	
Daly, Byrne M.	
Dana, Harold M.	Capt.
Daughtry, DeWitt C.	
Davidson, Harry O.	Capt.
Davies, Windsor S.	Lt.
Davis, George H.	Lt. Comdr. USN
Davis, Linden Lee	
Davis, William H.	
Day, Jay C.	Lt.
Deering, Robert James	
Defever, Cyril R.	Lt.
DeGroat, Albert	
Delbert, Stewart G.	Capt.
Deming, Edward G.	
Dennis, Melvin S.	
Deresz, Alphonse R.	
Derleth, Paul E.	Lt.
Deutsch, William L.	
Dick, Jack	
Dickman, Harry M.	Lt.
Dillihant, Jack	
DiLoreto, P. C.	Lt.
Diskin, Herman	
Dixon, Fred W.	Lt.
Dixon, Ralph C.	
Doerr, Louis E., Jr.	Capt.
Dolega, Stanley F.	Lt.
Domeier, Luverne H.	
Donald, Douglas	Major
Donovan, Richard S.	
Doran, Joseph K.	
Douglas, Clair L.	Major
Douns, James T.	
Drake, Ellet H.	
Ducey, Edward F.	
Duchesneau, Ferdnand P.	
Dunlap, Gregg L.	
Durham, Everett W.	
Durocher, Normand E.	Lt.
Durocher, Raymond	
Dwyer, Francis W.	Lt. Comdr. USN
Dziuba, John F.	Lt.
Eades, Charles C.	Capt.
Easley, John H.	
Eder, Joseph R.	Capt.
Edmondson, Robert B.	
Ellias, Elmer P.	
Ellis, Calvin C.	
Ellis, Seth W.	
End, Jack A.	
Engel, Earl H.	Lt. Comdr. USN
Eno, Laurel S.	
Epstein, S. G.	Lt.
Ersfeld, Murray P.	
Eschbach, Joseph W.	
Evans, William A., Jr.	Capt.
Ewing, C. H.	
Exum, William A.	
Falick, Mordecai L.	
Fandrich, Theodore S.	Lt.
Feigelman, Meyer J.	
Feldkamp, Lee E.	
Feldman, Nathaniel L.	
Feldman, Milton	
Feldman, Paul P.	
Feldstein, Martin Z.	
Fenech, Harold B.	Major
Fenton, Meryl M.	Capt.
Ferguson, Franklin F.	
Ferrara, Louis V.	Lt.
Finch, Sinclair F.	
Finlayson, Donald D.	
Finton, Max A.	
Fischer, Frederick J.	Capt.
Fischer, Willard E.	
Fisher, George S.	Lt.
Fitzgerald, E. W.	Lt. Comdr. USN
Fitzgerald, James M.	Capt.
Flaherty, Norman W.	Capt.
Flora, William R.	L. Comdr. USN
Flood, Richard E.	
Florentz, Theodore R.	
Ford, Sylvester	Capt.
Forsythe, John R.	Lt.
Foster, Alfred R.	
Foster, E. Bruce	Capt.
Fraiberg, Paul L.	
Fralick, Howard E.	
Francis, Donald	
Free, Harry W.	
Freedland, Morris	
Freedman, John	Capt.
Fremont, J. Courtney	Lt. Comdr. USN
Fried, Bernard H.	
Friedlaender, Alex S.	Lt.
Friedlander, Sidney	
Frostic, William D.	
Fuller, Hugh M.	Capt.
Gaba, Howard	Lt.
Gabe, Sigmund	Capt.
Gaston, Herbert B.	Lt. USN
Gaines, Sidney	
Gardner, Joe Harris	
Geib, Wayne A.	Lt.
Giese, Harold	
Gill, John N.	
Gilmore, John R.	
Gingold, Samuel M.	Lt.
Gingrich, Wayne A.	Capt.
Ginsberg, Harold I.	
Gladman, Arthur E.	
Glattauer, Alfred	
Glickman, L. G.	
Glodt, Herbert R.	
Goder, George A.	
Goetz, Angus G.	Lt. Comdr, USN
Goldberg, Arthur	Lt.
Goldin, M. I.	
Goldman, Aubrey	Lt.
Goldman, Bernard J.	
Goldman, Perry	Lt.
Goldstone, Beris A.	
Goley, Donald E.	
Good, William H., Jr.	
Goodman, Louis	
Goodman, Max	
Goodrich, Benjamin E.	Lt. Comdr. USN
Gordon, Devitt, L.	
Gordon, William Henry	
*Gorelick, Harry S. (deceased)	
Gorelick, Martin J.	
Goryl, Stephen B.	Lt.
Goss, S. B.	
Gourley, Eugene V.	Major
Gradis, Howard H.	
Grant, Gordon	
Gray, Arthur S.	
Green, Louis M.	Lt.
Green, Sydney H.	
Greenberg, Julius J.	Lt.
Greenberg, Morris Z.	
Greenwood, J. Harrison	
Grimaldi, Gregory J.	
Groscost, Arthur G.	
Grossman, S. C.	Lt.
Gutman, Emil	
Gutow, B. R.	
Gutterman, Meyer A.	
Halper, Bernard	
Hamburger, Albert C.	Capt.
Hammer, Howard J.	Capt.
Hammer, John M.	
Hammer, Raymond	
Hanelin, Joseph	
Hankins, Charles R.	
Hanna, Carl	
Hanson, Curtis M.	
Hanson, Frederick M.	Lt.
Hargrave, Dudley W.	
Harley, Garth W.	
Harper, Jesse T.	
Harrel, D. G.	
Harris, Harold H.	Lt. Comdr. USN
Hart, Charles E.	Lt.
Hart, John C.	Lt.
Harryman, James E.	
Harvey, Edward R., Jr.	
Hause, Glen E.	Capt.
Hauser, I. Jerome	Capt.
Hauser, John E.	
Hartzell, John B.	Lt. Comdr. USN
Hauser, M. J.	
Hays, A. L.	
Heath, Leonard P.	Capt.
Heavner, Lyle E.	Lt.
Heideman, Louis E.	Lt.
Hein, Richard J.	
Henderson, A. B.	
Henderson, Richard G.	
Henderson, William W.	
Hendricks, Roger C.	
Heneveld, Edward H.	
Henig, Fred	

Wayne (Continued)

Name	Rank
Henry, Charles M.	
Henry, Joseph R.	
Herbert, Walter N.	
Herkimer, Daniel R.	Lt. Comdr. USN
Herschelmann, Roy F.	Lt.
Herwick, John T.	
Hewitt, Robert S.	Capt.
Hileman, Walter	
Hill, John R.	
Hillenbrand, Alfred E.	Lt.
Hilsenbeck, John R.	
Hinko, Edward N.	Lt.
Hodges, Jason	
Hodgkinson, C. P.	
Hoffman, Harry Y.	
Hoffman, Henry A.	Capt.
Holden, M. H.	
Hollingsworth, Robert S.	
Holman, Herbert H.	Capt.
Holstein, Arthur P.	
Hooker, Donald H.	Capt.
Hookey, John A.	Capt.
Hoopes, Benjamin F.	
Horan, Thomas N.	Major
Horny, Hugo	Lt.
Horwitz, John B.	Capt.
Hotchkiss, William S.	
Howard, Merildeen W.	
Hoyt, Arthur W.	
Hubbard, Robert D.	
Huegli, W. A.	Lt.
Huff, Ralph H.	
Huffman, Elston R.	
Hummel, Arthur	
Hunt, Homer H.	
Hyatt, Jarvis M.	Lt.
Hyman, Samuel	
Iacobell, Peter H.	Lt.
Israel, Barney B.	Capt.
Iverson, Preston C.	
Ivkovich, Peter	Lt.
Jackson, H. H., Jr.	
Jacoby, Jack M.	
Jaffe, Louis	Capt.
Janes, R.	Capt.
Janton, Otto H.	
Jasion, Lawrence J.	Capt.
Jenkins, Elwood A.	Lt.
Jennings, Robert M.	Lt.
Jobb, Emil	
Johnson, Clarence E.	
Johnson, Franklin	
Johnson, Richard E.	
Johnson, Tom D.	
Johnston, Charles G.	
Jones, Horace C.	Lt. Comdr. USN
Jones, William E.	
Jordan, Prescott, Jr.	
Joyce, G.	
Joyce, Stanley J.	Lt. Comdr. USN
Juliar, Benjamin	
Kallman, Rueben R.	Lt. Comdr. USN
Kanter, Herman	Capt.
Kaplita, Walter A.	
Kass, Arnold	
Kauffman, William	Lt.
Kay, Harry H.	Lt.
Kazdan, Louis L.	Lt.
Kazdan, Morris M.	Lt.
Keene, Clifford H.	Capt.
Kelley, Frank J.	
Kelly, Alfred J.	
Kendig, Tom	
Kennedy, Donald J.	
Kernick, Melvin O.	Capt.
Kerr, William B.	
Kersker, Peter B.	
Keyes, John W.	Capt.
Kimball, David C.	Lt. Comdr. USN
Kimberlin, Kenneth K.	
King, Melbourne J.	Lt.
Kingsley, Summer B.	
Klein, Cyrus P.	
Kitzmiller, John L.	
Klinkowstein, Alex.	
Knaggs, Earl J.	Lt.
Knapp, Bryan S.	Capt.
Knapp, Wm. D.	
Knoch, Hubert S.	
Koch, John G.	
Kohn, Arthur M.	
Kohn, Max	
Kokowicz, Raymond J.	Lt.
Koon, William D.	
Korby, George J.	
Kosanovic, Frederick	Lt.
Koss, Frank R.	
Kossayda, Adam W.	Lt.
Kovan, Dennis D.	
Kove, Simon	
Kowalski, Valentine L.	
Kozlinski, Anthony E.	Lt.
Krass, E. W.	Major
Kritchman, Maurice J.	Capt.
Kuhn, Albert A.	Lt.
Kuhn, Richard F.	
Kuhn, Robert	
Kullman, Harold J.	
Kurcz, Joseph A.	Capt.
Kurtz, I. J.	
LaBerg, James M.	Capt.
LaCore, Ivan A.	Capt.
Ladd, Graham B.	
Lammy, James V.	Major
Lange, Wm. A.	Capt.
Lansky, Mandell	
Lapham, Fred E.	
LaRue, Robert E.	
Laub, Stanley V.	Lt. Comdr. USN
Lauppe, Frederick A.	
Lawton, Alfred H.	
Lazar, Morton R.	
Lazarski, K. M.	
Leach, David	
LeGallee, G. M.	Lt. Comdr. USN
Lehman, Wm. L.	Lt.
Leipsitz, L. S.	Lt.
Leland, Soloman	
Lemmon, Charles E.	Major
Lentine, James J.	Lt.
Lepisto, Victor E.	
Levagood, Floyd B.	
Levant, Arthur B.	Lt.
Levin, David M.	Capt.
Levin, Michael M.	Capt.
Levin, Samuel J.	Lt. Comdr. USN
Lewis, J. Hugh	Major
Lewis, Wilfrid John	Capt.
Lichter, M. L.	
Lignell, Rudolph	
Lipschutz, Louis S.	Major
Lipton, Raymond F.	
List, Harold E.	
Livingston, George D.	Lt.
Lofstrom, James E.	
Long, John J.	Capt.
Longyear, Harold W.	
Loomis, Frederick C.	
Loranger, Guy L.	
Lorber, Joseph H.	
Lord, Herman M.	
Lovas, William S.	Lt.
Lowenstine, Adolf W.	
Lukas, John R.	
Lum, T. K.	
Lund, Anthony J.	
Lynch, Charles H.	
Lynch, Vincent A.	
Lynk, Stanley M.	
McCadie, James H.	
McCauley, Morris D.	
McClure, Robert W.	Capt.
McColl, Charles W.	Lt.
McCullough, Francis E.	
McCollum, Estel B.	Capt.
McDonald, Peter W.	Capt.
McGlaughlan, Nicholas D.	
McGough, Joseph M.	Lt.
McGraw, Arthur B.	Lt. Comdr. USN
McGuire, Ivan A.	
McIntyre, Wm. B.	
McKean, G. Thomas	Capt.
McKean, Richard M	
McKenna, Charles J.	Capt.
McLean, Don W.	Capt.
McNickle, Jerry H.	
McQuiggan, Paul F.	
McRae, James H.	
Mabley, J. Donald	Major
Mack, Harold C.	Capt.
MacMillan, James M.	Capt.
Maibauer, F. P.	
Maire, Edward D.	Capt.
Maire, Harold A.	Capt.
Maison, George L.	
Maloney, J. A.	Lt. Comdr. USN
Mandiberg, Jack N.	
Maples, Douglas E.	Lt.
Maresh, E. R.	
Marino, Charles J.	
Marion, Donald F.	Capt.
Mark, Jerome	Lt.
Marks, Ben	
Markus, Ervin	
Marshall, Millard R	
Martin, Peter A.	
Martin, Richard D	
Martinson, Donald L.	
Martmer, Edgar E.	Capt.
Marwil, Thomas B.	Lt. Comdr. USN
Matson, Guy M.	
Mattes, Max W.	
Matthews, Harry C.	
Maxfield, Jack E.	
May, Frederick T.	Major
Merritt, Harry E.	
Myer, Theodore O.	
Myers, Kenneth L.	
Meyers, Maurice P.	
Meyers, Soloman G.	Major
Middleton, J. W.	
Miller, Harry	
Miller, Harry A., Jr.	
Miller, Hugh	
Miller, Karl L.	Capt.
Miller, Kenneth T.	
Miller, Thomas H.	Lt. Comdr. USN
Mills, Clinton C.	Capt.
Min, Henry	
Mindlin, R. L.	
Miro, Morey D.	
Mitchell, W. Bede	Capt.
Moloney, J. Clarke	Lt. Comdr. USN
Montante, Joseph R.	Lt.
Morley, Harold V.	Lt.
Morris, Roger	
Morrow, Rufus C.	
Morton, David G.	
Muehlig, George K.	
Munslow, Ralph A.	
Murphy, Donald J.	Lt. Comdr. USN
Murphy, Frank J.	
Murphy, John M.	Capt.
Muse, Jesse Phillip	
Muske, Paul H.	Lt.
Napolitano, Donald F.	
Neeb, Walter G.	Lt.
Nelson, Victor E.	Capt.
Newcomer, Sheldon R.	Lt.
Newell, Phillip D.	
Nichamin, Samuel J.	
Nickels, Albert W.	
Nickerson, I. D.	Lt.
Nielsen, Aage E.	Capt.
Nigg, Herbert L.	
Nigro, Norman D.	
Noer, Rudolph J.	
Nolting, Wilfrid S.	Lt.
Norconk, A. A.	Lt. Comdr. USN
Noreen, H. A.	
Novak, Walter S.	
O'Donnell, Dayton H.	Lt. Comdr. USN
Olechowski, Leo W.	Lt. Comdr. USN
Olenikoff, Alex	
Olmstead, George	
O'Linn, Francis P.	
Oppenheim, Joseph M.	
Ornstein, Charles	
Orr, Robert W.	
Orris, Israel	
Osius, Eugene A.	
Ott, Harold A.	Capt.
Ottaway, John P.	Lt.
Owen, Clarence I.	Major
Oxman, Albert C.	
Parker, Benjamin R.	Lt.
Patterson, Donald S.	
Paye, H.	
Peggs, George F.	
Pelczar, Walter E.	
Pelletier, Charles J.	
Penberthy, Grover C.	Col.
Pensler, Leslie	
Pensler, Meyer M.	
Perkin, Frank S.	Major
Perlin, Michael H.	
Perry, Alvin L.	
Peterson, Edwin P.	
Pettit, Vernon D.	
Pfeffer, Isadore S.	
Phillips, Francis J.	
Pike, Donald G.	
Pliskow, Harold	Lt.
Podewza, J. W.	Lt.
Poole, Marsh W.	
Porritt, Ross J.	
Pratt, L. A.	
Prentice, Edwin W.	
Price, Alvin E.	Major
Procailo, Alex B.	
Proctor, Bruce	
Pugh, Howard C.	

Wayne (Continued)

Name	Rank
Pugsley, G. W., Jr.	
Putra, Anthony M.	
Quigley, Eugene C.	Capt.
Rahm, Lambert P.	Capt.
Rather, L. J.	
Ravits, Harold G.	
Raw, Frederick W.	
Redding, Lowell G.	
Reder, B.	
Reid, J. Gilbert	
Reid, Wesley G.	
Reinsh, Ernest R.	Lt. Comdr. USN
Reisman, Samuel G.	
Reske, Alvin A.	Lt.
Rey, George E.	
Reynolds, William F.	
Rice, Clair M., Jr.	
Rice, Robert B.	
Richey, Bert R.	
Richmond, Marion B.	
Rickert, R. G.	
Riggs, George T.	
Riggs, Harry L.	
Rivera, Victor	
Robin, Herman	
Robins, S. C.	Lt.
Robinson, H. A.	
Rogoff, A. S.	Capt.
Rom, Jack	
Roman, Stanley J.	Capt.
Root, Charles T.	
Rosenberger, Homer G.	
Rosenthal, Louis H.	
Ross, Arno	Lt. Comdr. USN
Ross, Benjamin C.	
Ross, Samuel H.	
Roth, Theodore I.	Lt. Comdr. USN
Rothstein, Hyman	Lt.
Rottenberg, Leon	Lt.
Rottschafer, Gerald	
Rowell, Wilfrid J.	
Rubright, LeRoy W.	Capt.
Rueger, Milton J.	
Runde, Harold E.	
Runge, Paul William	
Rupprecht, Emil F.	
Ruskin, D. B.	
Russell, Vincent	Lt.
Sachs, Herman K.	Capt.
Sack, Anthony G.	Capt.
Salowich, John N.	
Sanders, John H.	
Sandler, Nathaniel	
Sanford, Hawley S.	Capt.
Sapala, Marion A.	
Sauk, John J.	Capt.
Savignic, Eugene M.	
Sawyer, Harold F.	Lt. Comdr. USN
Sayre, George S.	
Scarney, Herman D.	Lt. Comdr. USN
Schafer, Robert L.	
Schlesinger, Henry	
Schmaltz, John D.	
Schmidt, Harry E.	Capt.
Schmidt, J. Robert	Lt.
Schmidt, Milton R.	Lt. Comdr. USN
Schneider, Curt P.	Lt. Comdr. USN
Schneider, Richard	
Schofield, Norman D.	
Schoenfeld, John B.	
Schroeder, Carlisle F.	Capt.
Schug, Richard H.	
Schultz, Robert F.	Capt.
Schwab, Roland E.	
Schwartz, Louis A.	Lt. Comdr. USN
Schwartz, Oscar D.	
Schwartzberg, Joseph A.	Lt.
Schweigert, C. F.	Lt.
Scott, Robert J.	Capt.
Seliady, Joseph E.	Capt.
Seski, Arthur G.	
Shaffer, Joseph H.	Major
Shapiro, Isadore A.	
Sharp, Mahlon S.	
Shaver, Benjamin	
Shebasta, Emil M.	Capt.
Sheffrin, Peter	Lt.
Shelton, Carl F.	Capt.
Sheppard, Wm. B.	Lt.
Sherrin, Edgar R.	Lt. (S.G.) USN
Shewchuk, Alex P.	Lt.
Shifrin, Peter G.	
Shiovitz, Louis	
Shulak, Irving B.	Capt.
Shumaker, Edward J.	
Sickels, Edward W.	
Siegel, Henry	Capt.
Sill, Henry W.	
Sill, Jack A.	
Simons, Edward J.	Lt.
Skolnick, Max	Lt.
Skopek, Frank S.	
Skully, G. A.	
Slevin, John G.	Col.
Sliwin, Edward P.	Lt.
Slutzy, Joseph	
Small, Henry	
Smeltzer, Merrill	Capt.
Smith, Fred R.	Lt.
Smith, George E.	
Smith, Wm. S.	
Smyka, Edward J.	
Snedeker, Bernard C.	Capt.
Snyder, L. J.	
Socall, Charles J.	Capt.
Somers, D. C.	Major
Sorock, Milton	
Sorum, Eugene B.	
Spalding, Edward D.	Lt. Col.
Sparling, Harold	Capt.
Spector, Maurice J.	
Spencer, Samuel	
Speirs, Richard E.	
Spiro, Adolph	Lt.
Spitzer, Henry	
Sprunk, Carl J.	
Stack, David R., Jr.	
Stafford, Claude	
Stageman, J. C.	
Stamell, Meyer	Lt.
Stammell, Benjamin B.	
Stamos, H. F.	Lt. Comdr. USN
Stanley, Sherburn	
Stebbins, Charles E.	
Stefani, Raymond T.	
Steffensen, Ellis H.	
Steffes, Everett M.	Lt.
Stein, Albert H.	Lt.
Stein, Edward	
Stein, Saul C.	
Steiner, Max	
Steinhardt, Milton J.	Capt.
Steinfield, Winton	
Stobbe, Godfrey D.	Capt.
Stocker, Lawrence L.	
Stockwell, Benjamin W.	Capt.
Stokfisz, Thaddeus	
Stoll, Edward M.	
Stone, E. L.	
Stone, Sanford	Lt.
Strand, Martin E.	
Strickroot, Fred L.	
Sugar, Hyman S.	
Sugarman, Marus H.	
Sullenberger, Neil	
Summers, Wm. A.	
Swaney, Colletta	Lt. USN
Swartz, Fred G.	
Sykes, Edwin M., Jr.	
Sylvan, M. M.	
Symons, Hyman	
Szabunia, Sigmund C.	
Szejda, J. C.	Lt.
Szlachetka, Vincent E.	Capt.
Taylor, Ivan B.	Capt.
Taylor, Nelson M.	
Taxman, Joel E.	
Tear, Malcolm J.	Lt.
Teitelbaum, Myer	Capt.
Tellman, H. Clay	
Tenaglia, Edward	
Tenaglia, Thomas A.	Lt.
Thomas, Alf E., Jr.	
Thompson, Chase S.	
Thompson, Frank J.	
Thompson, H. O.	
Thurston, Roger G.	Lt.
Timmons, John R.	
Townsend, Frank M.	
Trapp, Donald G	
Tregenza, W. Kenneth	
Troester, George A.	Capt.
Trombley, Joseph J., Jr.	Capt.
Truog, Clarence P.	
Truszkowski, Edward G.	Lt.
Tulloch, John C.	Major
Turnbull, Jack V.	
Tuttle, William M.	
Twiggs, Leo F.	
Van Camp, Wesley	
Vangrow, Stanley	
VanRooy, George	
Vergosen, H. E.	Capt.
Vida, Alexander	
Vollmer, George K.	
Vroon, John	
Wachs, Leonard V.	
Wadsworth, George H.	Capt.
Walder, Harold J.	
Walker, Enos G.	
Wallace, Warren S.	
Wallman, C. H.	
Wanless, Loren E.	
Ward, W. Paul	
Warner, Harold W.	Lt. (J.G.) USN
Warner, Wm. J.	
Warnke, Robert D	
Warren, John W., Jr.	
Warren, Lloyd P.	
Warren, Wadsworth	Major
Watson, Douglas J.	Lt.
Watters, F. L.	Lt.
Watts, Frederick B.	Capt.
Wax, John H.	
Webb, Carl W.	
Webster, John E.	
Weed, Milton R.	
Weeks, Don J.	
Weimers, Eugene	
Weinberg, Jacob D.	
Weisberg, A. Allen	Capt.
Weisberg, Jacob	Capt.
Weisberg, Ralph J.	
Weiss, Joseph G.	
Welch, John	
Wentz, Arthur E.	
Wessels, Robert R.	
West, Robert H.	
Weston, Horace L.	Capt.
Whalen, E. P.	
Wheeler, Stewart C	
White, Prosper D., Jr.	
Whitehead, Leston S.	Capt.
Whitely, Robert K.	
Whitney, Rex E.	Lt.
Wiechowski, Henry E.	Lt.
Wiener, Israel	
Wietersen, Fred K	
Wilcox, L. F.	
Wildgen, Bernard C.	
Wilhelm, Seymour K.	
Williams, F. R.	
Williamson, Edwin M.	
Williamson, William P.	
Willson, Wesley W.	
Wilson, M. C.	Lt. Comdr, USN
Wilson, Walter J., Jr.	Capt.
Wiltberger, Benjamin	
Winfield, James M.	
Winsor, Carlton W.	
Winton, George	
Wishropp, Edward A.	Lt. Comdr. USN
Witter, Joseph A.	Capt.
Witus, Carl	
Woodward, T. E.	
Worthington, Ralph	
Wreggit, Winston R.	
Wright, Robert R.	
Wunsch, Richard E.	
Wyman, C. C.	Lt. Col.
Wynes, Maurice C.	
Wytowich, Walter S.	
Yetzer, William J.	
York, Fred P.	Lt. Col.
Young, Don A.	Lt.
Young, Donald C.	Lt. Comdr. USN
Young, Lloyd B.	Lt. Comdr. USN
Yott, Wm.	
Zabinski, Edward J.	
Zawadski, Edward S.	
Zbudowski, Alexander S.	
Zbudowski, Myron R.	
Zimmerman, I. J.	Capt.
Zukowski, Sigmund	

Wexford-Kalkaska-Missaukee

Albi, William	Major
Daugherty, Robert	Lt.
Hoagland, F. L.	Lt.
Inman, John C.	Lt.
Moore, G. P.	Capt.
Showalter, L. E.	Capt.

POSTGRADUATE INDUSTRIAL MEDICAL AND SURGICAL CONFERENCE

April 8, 1943

HORACE H. RACKHAM EDUCATIONAL MEMORIAL

Corner Farnsworth—at Woodward
DETROIT, MICHIGAN



Charles F. Kettering



Hon. Harry F. Kelly
Governor of Michigan



Louis Schwartz, M.D.



J. G. Townsend, M.D.



B. J. Hein, M.D.



C. M. Peterson, M.D.



J. J. Bloomfield



Andrew T. Court

Sponsored by

The Committee on Industrial Health
Michigan State Medical Society

In cooperation with

The Department of Postgraduate Medical Education
University of Michigan

MORNING SESSION

General Chairman

Kenneth E. Markuson, M.D., Lansing,
Chairman, Committee on Industrial Health,
Michigan State Medical Society

Presiding Chairman

H. H. Cummings, M.D., Ann Arbor,
President, Michigan State Medical Society

A.M.

9:30 **Address of Welcome**

9:40 **"The Present Status of Medical Programs in War Industries"**

J. G. TOWNSEND, M.D., Medical Director, Division of Industrial Hygiene, National Institute of Health, Bethesda, Md.

10:10 **"Study on Minor Burns"**

R. D. McCLURE, M.D., Surgeon-in-Chief, Henry Ford Hospital, Detroit

10:40 **"The Employment of Women in Industry"**

MAX BURNELL, M.D., Medical Director, AC Sparkplug Division, General Motors Corporation, Flint, Michigan

11:10 **"Industrial Hygiene in the War Industries"**

J. J. BLOOMFIELD, Chief, State Relations Section, Division of Industrial Hygiene, National Institute of Health, Bethesda, Maryland

11:40 **"Industrial Illness and Disability Analysis"**

ANDREW T. COURT, Labor Economics Section, General Motors Corporation, Detroit, Michigan

LUNCHEON

P.M.

12:15

Horace H. Rackham Educational Memorial

ROUND-TABLE DISCUSSION GROUPS

1:15

Horace H. Rackham Educational Memorial
Conference Rooms

1. **"Heart Disease in Industry"**

   Discussion Leader:
   HERMAN H. RIECKER, M.D., Assoc. Professor of Internal Medicine in Postgraduate Medicine, University of Michigan, Ann Arbor

2. **"Dermatitis in Industry"**

   Discussion Leader:
   LOUIS SCHWARTZ, M.D., Medical Director, Office of Dermatoses Investigations, National Institute of Health, Bethesda, Md.

3. **"Management of the More Common Industrial Fractures"**

   Discussion Leader:
   B. J. HEIN, M.D., Toledo, Ohio, Chairman, Committee on Industrial Health, Ohio State Medical Association

4. **"Traumatic Eye Injuries and Epidemic Keratoconjunctivitis"**

   Discussion Leader:
   PARKER HEATH, M.D., Professor of Ophthalmology, Wayne University College of Medicine, Detroit

5. **"Back Injuries--Medical Legal Complications"**

   Discussion Leader:
   CARL BADGLEY, M.D., Professor of Orthopedics, University of Michigan College of Medicine, Ann Arbor

AFTERNOON SESSION

Presiding Chairman

C. D. Selby, M.D., Detroit
President, Michigan Association of Industrial Physicians and Surgeons

P.M.

2:00 **"Dermatitis Due to Cutting Oils and Cutting Compounds"**

LOUIS SCHWARTZ, M.D., Medical Director, Office of Dermatoses Investigation, National Institute of Health, Bethesda, Md.

2:30 **Symposium on the Employment of the Handicapped Worker**

(a) **"Mental and Psychological Problems Relative to Industrial Employment"**

FRANK F. TALLMAN, M.D., Director of Mental Hygiene, Michigan State Hospital Commission, Lansing (Time: 30 min.)

(b) **"The Employment and the Evaluation of the Handicapped Worker in Industry"**

E. P. CHESTER, Director, Bureau of Rehabilitation Service, State Department of Education, Hartford, Conn. (Time: 30 min.)

Discussion:

1. **"Medico-legal Phases of Industrial Employment"**

   L. J. CAREY, General Counsel, Michigan Mutual Liability Insurance Company, Detroit (Time: 15 min.)

2. **"Viewpoint of the Michigan Department of Labor and Industry"**

   JOHN W. GIBSON, Chairman, Michigan Department of Labor and Industry, Lansing (Time: 15 min.)

3. **"Viewpoint of the Employer"**

   JOHN L. LOVETT, General Manager, Michigan Manufacturers Association, Detroit (Time: 15 min.)

4. **"Viewpoint of the Medical Profession"**

   C. M. PETERSON, M.D., Secretary, Council on Industrial Health, American Medical Association, Chicago (Time: 15 min.)

BANQUET

P.M.

6:30

Horace H. Rackham Educational Memorial, Detroit

Speakers

HONORABLE HARRY F. KELLY, Lansing,
Governor of the State of Michigan
CHARLES F. KETTERING, Detroit,
Vice President in Charge of Research,
General Motors Corporation

(Concluded from February Issue)

THIRD MEETING

January 16, 1943—8:30 P.M.

20. *Reference Committee Report of County Society Committee* was presented by Dr. Huron.

REPORT OF REFERENCE COMMITTEE OF THE COUNTY SOCIETIES COMMITTEE

Reports referred to this committee by The Council were:

(1) Secretary's Report; (2) Report of the Publication Committee; (3) Report of C. E. Umphrey, M.D., Chairman of the Special Committee of The Council on Integration of Postgraduate Programs.

1. The *Secretary's report* as presented was approved unanimously, with the exception of Recommendation No. 3 which study, it was felt, should be done by the Postgraduate Medical Education Committee, MSMS, to report a definite planned program to The Council at its next session.

The Secretary was commended for his fine work and excellent report.

2. *Publication Committee Report.*—The Reference Committee of the County Societies Committee approves the report, as submitted.

3. The report of Dr. Umphrey, Chairman of The Council's *Special Committee,* was discussed and Dr. Umphrey was commended for his excellent report and study of this important matter of postgraduate work being done in Wayne County.

The Reference Committee of the County Societies Committee wishes to make the following recommendations re Dr. Umphrey's report:

(1) In view of the excellent clinical material and teaching facilities available in Wayne County, it feels that the Postgraduate Medical Education Committee, MSMS, should avail itself of their use for the good of all in the State Society.

(2) There should be an integration of the Wayne County postgraduate programs into the MSMS postgraduate programs.

(3) The budget of the P.G. Medical Education Committee, MSMS, should include sufficient funds for any increase in the scope of the postgraduate programs.

Respectfully submitted,

W. H. Huron, M.D.
R. J. Hubbell, M.D.
A. H. Miller, M.D.
P. A. Riley, M.D.

Motion of Drs. Huron-Umphrey that the report of the Reference Committee, as amended, be adopted. The Council discussed the Reference Committee report, especially Item 2 re problem of frequent changes of address, and Item 1 re Secretary's recommendation concerning a definite planned program of post-war postgraduate medical education for members returning from service in the armed forces. Carried unanimously.

21. *Reference Committee Report of the Finance Committee* was presented by Dr. Moore.

REFERENCE REPORT OF FINANCE COMMITTEE

Your Reference Committee considered the following matters:

1. *Report of Trustee Fund for 1942.* The report of the Trustee Fund for 1942 was presented and approved on motion of Drs. Morrish-Barstow. Carried unanimously.

2. *Report of Treasurer for 1942* was presented, and on motion of Drs. Barstow-Morrish was approved. Carried unanimously.

3. *County Societies Committee Report:*

(a) The county society programs as recommended were approved.

(b) The radio activity program as recommended was approved.

(c) High School examinations for children: It was recommended that paragraph 4 of the minutes of the County Society Committee re this matter, be deleted, and replaced as follows:

(1) That adequate physical examination by a Doctor of Medicine be approved;

(2) That the private physician-patient relationship be utilized whenever possible —and report by the MD be limited to a statement of approval or disapproval of fitness to participate in any athletic or "hardening" program.

(3) That in all other cases of such examinations the plans should be set up and approved by the local county medical society.

(d) Disability Insurance. This matter was approved as presented, motion of Drs. Barstow-Ledwidge. Carried unanimously.

Motion of Drs. Ledwidge-Morrish that the report of the County Societies Committee be approved, as corrected. Carried unanimously.

4. *Joint Committee on Health Education.*—This report as presented by Dr. B. R. Corbus was approved, motion of Drs. Ledwidge-Morrish. Carried unanimously.

Respectfully submitted,

V. M. Moore, M.D., *Chairman*
W. E. Barstow, M.D.
R. S. Morrish, M.D.
P. L. Ledwidge, M.D.

Motion of Drs. Moore-Beck that the report of the Reference Committee be adopted. The Council discussed Item 3-c re examinations of high school students before participation in athletic "hardening" programs. Carried unanimously.

22. *Reference Committee Report of the Publication Committee* was presented by Dr. Perkins.

REFERENCE REPORT OF PUBLICATION COMMITTEE

Your Reference Committee considered the following matters referred to it and took the following actions:

1. The Wayne County Resolution, adopted by the WCMS on January 8: motion was made by Drs. Beck-Stryker that a substitute resolution be approved, as follows:

> "That no action should be taken by organized Medicine approving the appointment for public position of any individual who openly has expressed himself as favoring federal control as opposed to the private practice of medicine."

This amended the original resolution by inserting the word "openly." The motion was carried unanimously.

2. The report of the Finance Committee, including the budget for the Society and for the MSMS JOURNAL, as submitted, was approved on motion of Drs. Beck-Stryker. Carried unanimously.

BUDGET, MSMS, 1943

INCOME	
3,630 Members @ $12	$43,560
Less allocation to JOURNAL @ $1.50	5,445
	$38,115
Interest	150
Miscellaneous	100
NET INCOME	$38,365
Loan from Savings	3,000
	$41,365
APPROPRIATIONS	
Administrative & General:	
Administrative Salaries	$11,600
Salaries: Office—regular	6,120
Extra	100
Office Rent and Light	1,325
Printing, Stat., Supplies	800
Postage	1,000
Insurance and Fidelity Bonds	165
Auditing	400
Repairs to Equipment	50
Telephone and Telegraph	800
Michigan Sales Tax	100
Payroll taxes	125
Miscellaneous	75
Total	$22,660
Less expenses redistributed to JOURNAL	1,800
TOTAL ADMINISTRATION AND GENERAL	$20,860
Society Activities:	
Council Expense	$ 2,800
Delegates to AMA	500
County Secy. Conferences	1,000
General Soc. Travel Expense	1,150
Officer Travel Expense	500
Secretary's Letters	400
Publication Expense	50
Reporting Annual Meeting	175
Secretary's Expense	400
Education Expense	1,250
National Conf. on Med. Service	200
Organizational Expense	1,250
Legal Expense	200
Woman's Auxiliary-Ann. Meeting	200
Sundry Society Expenses	500
NET SOCIETY EXPENSE	$10,575
Committee Expenses:	
Legislative	$ 3,000
Dist. of Medical Care	50
Joint Com. on Health Education	500
Postgraduate Medical Education	3,225
Preventive Medicine	250
Cancer	1,000
Child Welfare	200
Iodized Salt	50
Heart and Deg. Diseases	50
Industrial Health	400
Maternal Health	50
Mental Hygiene	50
Radio	25
Syphilis Control	150
Tuberculosis Control	30
Public Relations	150
Ethics	50
Scientific Work	100
Medical Preparedness	400
Prelicensure Medical Education	50
Professional Liaison	50
Sundry Other Committees	100
TOTAL COMMITTEE EXPENSE	$ 9,930
GRAND TOTAL	$41,365

BUDGET FOR JOURNAL, 1943

INCOME	
Subscriptions from members	$ 5,445
Other subscriptions	190
Advertising Sales	11,100
Reprint Sales	1,375
JOURNAL Cuts	240
TOTAL JOURNAL INCOME	$18,350
EXPENSES	
Editor's Salary	$ 1,200
Editor's Expense	900
Printing and mailing	12,000
Cost of reprints	1,100
Discounts and Commissions on adv. sales	1,100
Allocation of administrative and general office expense	1,800
Postage	250
TOTAL JOURNAL EXPENSE	$18,350

3. The *Editor's Report,* as submitted, was accepted on motion of Drs. Stryker-Beck. Carried unanimously.

4. The *proposed amendment to the Medical Practice Act* (to Sec. 3, First, (f), Act 237 of the P. A. of 1899, as amended), recommended by the Michigan State Board of Registration in Medicine was amended by striking out the words "or other threatening or existing national calamity." The suggested amendment, therefore, would read as follows:

> "The provisions of the sub-paragraphs of sub-paragraph First, hereof, may be suspended in whole or in part by order of the Board on account of war."

Motion of Drs. Stryker-Beck that this proposed amendment be accepted in lieu of that indicated in Item 6 of the minutes of the MSMS Legislative Committee meeting of January 14, 1943. This new draft is shorter and therefore may be received with more favor by the Legislature. Carried unanimously.

Respectfully Submitted,

R. C. PERKINS, M.D.
O. O. BECK, M.D.
T. E. DEGURSE, M.D.
O. D. STRYKER, M.D.
C. E. UMPHREY, M.D.

Motion of Drs. Perkins-Riley that the report of the Reference Committee be adopted. Carried unanimously.

Recess at 9:55 p.m.

FOURTH MEETING

January 17, 1943—11:10 A.M.

23. *Minutes.*—The minutes of the first three meetings of this session of The Council were read and approved on motion of Dr. Haughey, seconded by several. Carried unanimously.

24. *Michigan Medical Service Progress Report.*—R. L. Novy, M.D., President of MMS, presented a progress report, upon invitation. He stated that since September, the changes as outlined by the MSMS House of Delegates have been or are in the progress of being made. Three meetings of the Board have been held, with eight other meetings of committees on topics assigned and referred back to the Board. Ground has been covered and progress is being made. Ninety per cent of the subscribers have been changed over to the 60c rate, which rate increases the income of the corporation. As

of September, the corporation was approximately half a million in the red, but the new rate and double deductions which went into effect will eliminate the deficit; another favorable factor is the autumn slump of reporting cases, an annual experience.

The exact financial status is not known until the state auditors complete their check to October 31 and another check to December 31, 1942. A slight profit was made in October and November, and a larger profit is anticipated for December.

Changes in the contract have been made, especially in the percentage of the group required before acceptance thereof, as follows:

75 per cent of the group is necessary to achieve the 60c basic rate;

60 per cent of the group results in a 70c basic rate;

50 per cent of the group results in an 80c basic rate.

In addition, females in the group raise the cost of the basic rate. No groups are accepted with less than 50 per cent of the total. Twenty-five persons represent the smallest group accepted. All groups must have payroll deduction.

The local committees have been appointed to study a greater leniency toward office procedure; however, the present financial condition of MMS will not permit of any such program, even though all favor the idea. The financial problem is an immediate one.

The Medical Advisory Committee is studying certain contract provisions. such as payments for congenital defects, and whether payments for pregnancy apply only to the family and not to the individual or to the husband-and-wife contracts. The schedule of benefits has been completely reviewed, and made uniform; rules have been set up to eliminate a physician billing as individual operations a number of operations done at the same time.

A survey of the joint expenses with Michigan Hospital Service is in progress but has not been completed. The amount of authority delegated to MHS is being whipped into shape, although complete separation is not feasible at this time, mainly due to inability to obtain mechanical equipment. Presentation of the program and its control (which has made the problem in the past) will have better supervision in the future.

Re a local representative of MMS in the Lansing office: prospective employes are being interviewed at the present time for this position.

Dr. Novy stated that the number of complaints from Doctors of Medicine and from the public has fallen off and is now at a low ebb, probably due to the economic situation. He stated that a bulletin will be sent to all members of the profession in a few days, listing the activities of MMS since September.

The Chair thanked Dr. Novy for his report and for his kindness in attending this meeting. Discussion by Drs. Perkins, Cummings, et al., was followed by a motion made by Dr. DeGurse and seconded by others that a vote of thanks be extended to Dr. Novy and his committees for the excellent work done; that Dr. Novy has worked tirelessly and The Council wishes to pay him a compliment.

In discussing this motion, Dr. Novy suggested that The Council wait until all interested can be optimistic concerning MMS, and at this time merely signal good wishes. The motion was carried unanimously and the Chair expressed thanks to Dr. Novy and his committee.

Dr. Morrish asked: "Will the new Insurance Commissioner take a liberal attitude toward the deficit of MMS?" President Novy answered that as a going concern and a corporation now making a profit every month, MMS is not required by law to provide for immediate liquidation as are some commercial concerns (such as the ordinary insurance company). The monthly report to the Board of Directors represents the total income, the expenditures, and a full statement on the backlog of debt. Dr. Novy stated that his desires concerning no differentiation between participating and non-participating physicians for which he stood in September, is in effect.

Labor has accepted the new rates: MMS has not taken on any new groups, although Packard now wishes to become subscribers of MMS. Only on condition that Packard produce 75 per cent of the workers and 75 per cent of the family group would it be considered.

Dr. Novy stated that the problem is to digest the volume which MMS now has, and not take on more groups (such as Willow Run).

Dr. Novy's remarks were discussed by Drs. Umphrey and Beck. The Chair again thanked Dr. Novy for his report and kindness in leaving his sickbed to attend this meeting.

25. *State Hospital Commission.*—A letter from Ray W. Waggoner, M.D., Chairman of the MSMS Mental Hygiene Committee, recommending that The Council request the Governor to appoint at least two Doctors of Medicine to the State Hospital Commission, was read and referred to the Legislative Committee on motion of Drs. Umphrey-Ledwidge. Carried unanimously.

Dr. Cummings suggested that a list of eligible physicians for all Boards in which the medical profession has an interest should be developed for presentation to Governor Kelly. Motion of Drs. Umphrey-DeGurse that the President, in coöperation with the Legislative Committee, suggest names for appointments to State Boards in which the medical profession has an interest. Carried unanimously.

The Chair requested the Councilors to submit any nominations for these various State Boards to the Executive Office in Lansing, as soon as possible.

26. *Rehabilitation Program* of Michigan State Board of Control for Vocational Education. Dr. Ledwidge, Chairman of the special committee on this subject, gave a report on the background of the State Board of Control for Vocational Education, and stressed that the supplying of medical care was an entirely new departure and an experiment only in Michigan, that qualified free choice of physician is permitted, and that the county fee schedule is to be used, that it is a federally inspired program and if successful it will be enlarged and expanded in other states. He requested instructions for his committee.

President Cummings stated that the activity had already started and that the medical profession had not been contacted. However, the medical profession must direct this movement which cannot be swept back and cannot be ignored. The President suggested that the committee investigate this program and after a full understanding of it, make all efforts to direct it as the medical profession would like it. After full consideration, The Council instructed the special committee to use its influence so that proper coöperation in this experiment be obtained.

27. *Annual County Secretaries' Conference* of January 24 was announced by the Chair, who urged all Councilors and officers to attend.

28. **Elections.—**

(a) *Secretary.* L. Fernald Foster, M.D., Bay City, was nominated for reëlection by Drs. DeGurse-Perkins. Motion of Dr. DeGurse seconded by several that the nominations be closed and the Secretary be instructed to cast the unanimous ballot for L. Fernald Foster, M.D., as Secretary of the MSMS. Carried unanimously. The Secretary did so cast and the Chair declared Dr. Foster reëlected as Secretary.

(b) *Treasurer.* Wm. A. Hyland, M.D., Grand Rapids, was nominated by Dr. Stryker and several others. Motion of Dr. Ledwidge seconded by several that the nominations be closed and the Secretary be instructed to cast the unanimous ballot for Wm. A. Hyland as Treasurer. Carried unanimously. The Secretary did so cast and the Chair declared Dr. Hyland reëlected as Treasurer.

(c) *Editor of the Journal.*—Wilfrid Haughey, M.D., Battle Creek, was nominated as Editor by Drs. Perkins and Miller. Motion of Dr. Barstow-several that the nominations be closed and the Secretary be instructed to cast the unanimous ballot for Wilfrid Haughey, M.D., as Editor of THE JOURNAL, MSMS. Carried unanimously. The Secretary did so cast and the Chairman declared Dr. Haughey as Editor of THE JOURNAL.

Appointment of Executive Secretary.—Wm. J. Burns was nominated by Drs. Miller and Ledwidge. Motion of Dr. DeGurse seconded by several that the nomination be closed and the Secretary be instructed to cast the unanimous ballot for Mr. Burns as Executive Secretary of the MSMS. Carried unanimously. The Secretary did so cast and the Chairman appointed Mr. Burns as Executive Secretary.

29. *Michigan Crippled Children Commission.*—Secretary Foster reported on his contact concerning possible vacancy on the Commission.

30. *Adjournment.*—The meeting was adjourned at 1:00 p.m., the Chair thanking all for their attendance, their helpful advice, and the celerity with which The Council made its important decisions.

REPORT OF AUDITORS FOR 1942

We have examined the balance sheet of the Michigan State Medical Society as of December 26, 1942, and the statement of income and expense for the fiscal year then ended, have reviewed the system of internal control and the accounting procedures of the Society and, without making a detailed audit of the transactions, have examined or tested accounting records of the Society and other supporting evidence, by methods and to the extent we deemed appropriate. Our examination was made in accordance with generally accepted auditing standards applicable in the circumstances and included all procedures which we considered necessary.

The Society was organized under the laws of the State of Michigan on September 17, 1910, as a corporation not for pecuniary profit. On November 10, 1941, the charter was extended for a period of thirty years from September 17, 1940. The Society is affiliated with the American Medical Association and charters county medical societies within the State of Michigan. The purposes of the Society are the promotion of the science and art of medicine, the protection of the public health, and the betterment of the medical profession. In the furtherance of these purposes, the Society publishes THE JOURNAL OF THE MICHIGAN STATE MEDICAL SOCIETY.

Balance Sheet

A summary of the balance sheets at December 26, 1942, follows.

ASSETS

Cash	$31,524.87
Accounts receivable, less reserve	2,105.27
Securities—at cost	22,619.50
Postgraduate Medical Education Foundation	9,715.31
Deferred charges	111.99
	$66,076.94

LIABILITIES

Accounts payable	$ 1,552.42
Unearned income	12,256.00
Reserves	12,115.31
Net worth	40,153.21
	$66,076.94

Note A—Securities at December 20, 1941, were stated at market prices as of that date.

Income and Expense Statement

A summary of the income and expense statement for the fiscal year ended December 26, 1942, is presented as follows:

Income:	
Membership fees	$46,150.03
Income from THE JOURNAL	1,703.93
Interest received	1,068.28
Miscellaneous	62.12
TOTAL INCOME	$48,984.36
Expenses:	
Administrative and general	$21,974.71
Society activities	6,697.27
Committee expenses	7,629.99
TOTAL EXPENSE	$36,301.97
EXCESS OF INCOME OVER EXPENSE	$12,682.39
Other expenses	13,291.00
NET INCOME OR LOSS	$ 608.61

The income from THE JOURNAL and the expenses of the Society are shown in greater detail in comparison with the respective budgets in separate schedules included herein. As in prior years, $1.50 of each individual's annual membership fee has been allocated to subscription income of THE JOURNAL.

The following comments relate to the accompanying financial statements and to certain phases of our examination:

Accounts receivable for advertising, reprints, etc., were analyzed and classified as to month of charge and are shown as follows:

MONTH OF CHARGE

	Amount	Per Cent
October, November, and December	$1,062.94	$ 94.91
July, August, and September	16.00	1.43
January to June, inclusive	.....	....
Prior to January 1	41.00	3.66
TOTAL	$1,119.94	$100.00

We tested the balances of accounts receivable at December 26, 1942, by communication with selected debtors. In our opinion, the reserve in the amount of $175.00 is sufficient to care for losses anticipated in the collection of the accounts.

Securities owned at December 26, 1942, were inspected by us in the course of our examination and we accounted for the income therefrom for the year.

Funds for MSMS Postgraduate Foundation

During the year, cash and securities of the Society aggregating $10,000.00 were transferred to the Michigan National Bank as trustee for the Michigan State Medical Society Foundation for Postgraduate Medical Education, which was created in accordance with a trust agreement dated June 18, 1942. The purpose of the Foundation is to establish an endowment fund, the income from which may be expended for educational purposes relating to the science and practice of medicine and surgery.

The securities held by the trustee for the Foundation at December 26, 1942, are listed separately in a schedule included with this report. Securities held by the Society are also shown in this schedule.

The assets transferred to the Foundation have been segregated from those of the Society and are shown

separately in the balance sheet at December 26, 1942. A reserve of an equal amount has been set aside from the net worth of the Michigan State Medical Society.

A reserve has been provided to reduce the prices of the securities transferred to the Foundation at September 4, 1942, from market prices to the cost thereof.

Waived Dues of Military Members

The Society has adopted the policy of waiving payment of dues of members in the armed forces of the United States, and in the event the current year's dues were paid, to allow one year's membership without charge at the expiration of service. A provision of $9,900.00 has been made to defer the income received from those members known to be in service who have paid dues for the year in which they entered service. This amount has been based upon reports from county societies. An additional provision of $2,400.00 has been made for deferment of dues of members in military service who have not been reported to the Society as being in service.

Opinion

In our opinion, the accompanying balance sheet and related statements of income and expense present fairly the position of the Michigan State Medical Society at December 26, 1942, and the results of its operations for the fiscal year, in conformity with generally accepted accounting principles applied on a basis consistent with that of the preceding year.

ERNST and ERNST

January 7, 1943

BALANCE SHEET

MICHIGAN STATE MEDICAL SOCIETY

December 26, 1942

ASSETS			
Cash			
Demand deposits		$ 9,007.53	
Office cash fund		3.00	
Savings deposits		22,514.34	
			$31,524.87
Accounts Receivable			
For advertising, reprints, etc.	$1,119.94		
From county societies for dues	58.58		
	$1,178.52		
Less reserve	175.00		
		$ 1,003.52	
From exhibitors, for space at 1943 annual meeting		276.75	
Deposit on 1943 printing contract		825.00	
			2,105.27
Securities			
Bonds, at cost			22,619.50
Postgraduate Medical Education Foundation			
Bonds, at market prices on 9/4/42	$9,359.00		
Less reserve to reduce to cost	303.72		
		$ 9,055.28	
Cash		660.03	
			9,715.31
Michigan Medical Service			
Organizational expenditures made by Michigan State Medical Society		$17,544.45	
Less reserve		17,544.45	
Deferred Charges			
Expenses in connection with 1943 activities			111.99
			$66,076.94
LIABILITIES			
Accounts Payable			
For current expenses, etc.		$1,506.89	
Pay roll taxes		45.53	
			$ 1,552.42
Unearned Income			
Sale of exhibitors' space at 1943 annual meeting		$ 1,117.50	
Dues for the year 1943		1,238.50	
Dues of military members applicable to a future year		9,900.00	
			12,256.00
Reserves			
For deferment of dues paid by military members not reported		$ 2,400.00	
For Postgraduate Med. Education Foundation		9,715.31	
			$12,115.31
Net Worth			
Balance at December 21, 1941		$48,771.88	
Add reserve to reduce securities to aggregate market prices at 12/20/41, no longer required		1,686.22	
		$50,458.10	
Less securities and cash transferred to P.G. Med. Educ. Foundation	$10,000.00		
Less excess of market prices of securities transferred over cost thereof	303.72		
		9,696.28	
		$40,761.82	
Net loss for the year		608.61	
			40,153.21
			$66,076.94

INCOME AND EXPENSE STATEMENT
MICHIGAN STATE MEDICAL SOCIETY
Fiscal year ended December 26, 1942

Income:		
Membership fees	$52,738.00	
Less portion allocated to income of THE JOURNAL for subscriptions	6,587.97	
		$46,150.03
Income from THE JOURNAL—as shown schedule		1,703.93
Interest:		
On securities	890.47	
On savings deposits	177.81	
		1,068.28
Special insurance forms sold		7.75
Miscellaneous		54.37
TOTAL INCOME		$48,984.36
Expenses—as shown by schedule:		
Administrative and general	$21,974.71	
Society activities	6,697.27	
Committee expenses	7,629.99	
		36,301.97
EXCESS OF INCOME OVER EXPENSES		$12,682.39
Other Deductions:		
Loss on sale of securities	$ 1,591.00	
Provision for deferment of dues paid by military members	11,700.00	
		13,291.00
NET LOSS		$ 608.61

SOCIETY ACTIVITIES

Council expense	$ 3,158.85
District meetings expense	368.56
Delegates to American Med. Assn.	832.37
County Secretaries' Conference	1,108.87
General society travel expense	366.25
Officers' travel expense	650.75
Secretary's letters	397.27
PUBLICATION EXPENSE	77.57
Reporting annual meeting	162.63
Educational expense	500.00
National Conf. on Medical Service	202.85
Organizational expense	.....
LEGAL EXPENSE	45.00
Woman's Auxiliary—annual meeting	.....
Sundry society expenses	503.54
Special legal expense—P. G. Foundation	600.00
Contingent Fund	.....
	$ 8,974.49
Less revenue from annual meeting in excess of cost thereof	2,277.22
	$ 6,697.27

COMMITTEE EXPENSES

Legislative	$ 277.94
Distribution of Medical Care	59.85
Joint Committee on Health Education	1,000.00
Postgraduate Medical Education	3,204.13
Preventive Medicine	92.75
Cancer	147.75
Child Welfare	234.07
Iodized Salt	6.00
Heart & Degenerative Diseases	71.00
Industrial Health	63.71
Maternal Health	22.40
Mental Hygiene	....
Radio	....
Syphilis Control	129.97
Tuberculosis Control	28.03
Public Relations	416.92
Ethics	23.45
Scientific Work	153.59
Medical Preparedness	1,402.63
Prelicensure Medical Education	....
Professional Liaison	....
Workmen's Compensation	21.90
House of Delegates	24.66
Advisory Committee to Woman's Auxiliary	200.00
Prelicensure Medical Education	42.04
Sundry other committees	7.20
	$ 7,629.99
TOTAL	$36,301.97

INCOME FROM "THE JOURNAL OF THE MICHIGAN STATE MEDICAL SOCIETY"
Fiscal year ended December 26, 1942

INCOME		
Subscriptions from members	$ 6,587.97	
Other subscriptions	187.00	
Advertising sales	11,861.37	
Reprint sales	1,480.56	
Journal cuts	401.18	
		$20,518.08
EXPENSES		
Editor's salary	$ 1,350.00	
Editor's expense	900.00	
Printing and mailing	12,229.95	
Cost of reprints	1,052.48	
Discounts and commissions on adv. sales	1,119.22	
Allocation of administrative and general expense	1,800.00	
Postage	250.00	
Extraordinary JOURNAL expense	112.50	
		$18,814.15
NET INCOME		$ 1,703.93

EXPENSES
MICHIGAN STATE MEDICAL SOCIETY
Fiscal year ended December 26, 1942

ADMINISTRATIVE AND GENERAL:		
Salaries:		
Administrative	$11,600.00	
Office	6,806.90	
Extra	48.00	
Office rent and light	1,316.00	
Printing, stationery, supplies	754.90	
Postage	820.83	
Insurance & fidelity bonds	166.00	
Auditing	380.00	
New equipment & repairs	484.60	
Telephone & telegraph	699.99	
Michigan sales tax	81.11	
Pay roll taxes	142.05	
Medical Secretary's expense	399.96	
Miscellaneous	74.37	
		$23,774.71
Less expenses redistributed to JOURNAL	1,800.00	
		$21,974.71

YOU AND YOUR BUSINESS

MARQUETTE UNIVERSITY GRADUATES 150 MEDICAL STUDENTS

Rear Admiral Ross T. McIntire, Surgeon General of the United States Navy and personal physician to President Roosevelt, gave the Convocation Address and had conferred upon him the degree of Doctor of Science (honoris causa) at the Commencement Exercises of the Marquette University School of Medicine in the Milwaukee Auditorium, Saturday evening, February 13, 1943.

As a result of the accelerated program in medical education and the abolishment for the duration of the War of the requirement of the internship, which has existed since 1918, for the degree of Doctor of Medicine, two classes of 150 students were graduated. There were seventy-three students in the class that entered the Medical School in 1938 and seventy-seven who entered the Medical School in 1939. All of these graduates will serve a twelve-month internship as Doctors of Medicine, which corresponds with the custom of the majority of medical schools in the United States and Canada.

RESEARCH AWARDS

The American Association of Obstetricians, Gynecologists and Abdominal Surgeons announces an award of $150.00, for the Foundation, open to interns, residents, or graduates in obstetrics, gynecology or abdominal surgery, or doctors of medicine who are actively teaching in this field. For information address Dr. James R. Bloss, Secretary, 418 Eleventh Street, Huntington, West Virginia.

The Research Council on Problems of Alcohol announces $1,000 Cash Award for outstanding research on alcoholism during 1943. The research must contribute new knowledge, in some branch of medicine, biology, or sociology, important to the understanding or prevention or treatment of alcoholism. It is desirable, but not necessary, that those planning to work for the award send to the council before March 1, 1943, a statement of such intention. A report on the work and resulting conclusions must be submitted to the Research Council on Problems of Alcohol on or before February 15, 1944. The Council will provide an outline for use in the preparation of reports. Address The Director, The Research Council on Problems of Alcohol, Pondfield Road West, Bronxville, New York.

REFRESHER COURSE IN LARYNGOLOGY, RHINOLOGY AND OTOLOGY

The University of Illinois College of Medicine offers a refresher course March 22 to 27, inclusive, to meet the needs of ear, nose and throat specialists who, under existing conditions, are able to devote only a brief period to postgraduate review study, this didactic and clinical course has been arranged. Registration is limited. The fee for the complete course is $50.00. In letter requesting application for registration, state school and year of graduation, also details concerning specialty training and experience. Address Department of Otolaryngology, University of Illinois College of Medicine, 1853 West Polk Street, Chicago, Illinois.

BOARD EXAMINATION

The American Board of Ophthalmology announces 1943 examinations at New York City, June 4 and 5, Chicago, October 8 and 9. Candidates will be required to appear for examination on two successive days. Please write at once for formal application blanks to Dr. John Green, Secretary, 6830 Waterman Avenue, St. Louis, Missouri.

CONVENTIONS CANCELLED

The House of Delegates of the American Medical Association will convene in Chicago on June 7. The meeting will take the place of the 94th annual session of the association, originally scheduled to convene in San Francisco in 1943.

* * *

The government has again discouraged the holding of medical conventions, except those primarily of military interest. Under the circumstances, plans for the June meeting of the American Urological Association in St. Louis, have been canceled. The $500 Research Prize annually offered by the American Urological Association will not be awarded this year.

SUPREME COURT DECISION

Paragraph 7.—"Group Health is a membership corporation engaged in business or trade. Its corporate activity is the consummation of the coöperative effort of its members to obtain for themselves and their families medical service and hospitalization on a risk-sharing prepayment basis. The corporation collects its funds from members. With these funds physicians are employed and hospitalization procured on behalf of members and their dependents. The fact that it is coöperative, and procures service and facilities on behalf of its members only, does not remove its activities from the sphere of business."

Paragraph 29.—"Third. We hold that the dispute between petitioners and their members, and Group Health and its members, was not one concerning terms and conditions of employment within the Clayton and the Norris-La Guardia Acts."

Paragraph 37.—"In truth, the petitioners represented physicians who desired that they and all others should practice independently on a fee for service basis where whatever arrangement for payment each had was a matter that lay between him and his patient in each individual case of service or treatment. The petitioners

(Continued on Page 226)



When depression accompanies more fundamental pathology

In many patients, depression may occur as an accompaniment of some more fundamental pathology, either organic or psychogenic. In such cases, the physician should bear in mind that, while Benzedrine Sulfate will not affect the underlying condition, its stimulatory effects may help to alleviate the concomitant depression which so often interferes with the management of the case.

Benzedrine Sulfate Tablets

Brand of amphetamine sulfate

Benzedrine Sulfate is primarily useful in depressions characterized by apathy and psychomotor retardation, but is contraindicated in patients manifesting anxiety, hyperexcitability, or restlessness.

The use of Benzedrine Sulfate by normals should not be permitted; it should always be administered under the careful supervision of a physician; and depressive psychopathic cases should be institutionalized.

In treating depressed patients with Benzedrine Sulfate, the physician should bear in mind that any drug which produces pleasant or euphoric effects may prove to be habit forming—especially in unstable or neurotic individuals.

SMITH, KLINE & FRENCH LABORATORIES, PHILADELPHIA, PA.

(Continued from Page 224)

were not an association of employes in any proper sense of the term. They were an association of individual practitioners each exercising his calling as an independent unit. These independent physicians, and the two petitioning associations which represent them, were interested solely in preventing the operation of a business conducted in corporate form by Group Health."

Paragraph 39.—The judgments are affirmed.

IN MEMORIAM

Hugh W. Graham, of Mount Morris, was born March 29, 1868, at Woodbridge, Ontario, and was graduated from the University of Michigan Medical School in 1892. He opened his practice in Mount Morris, where he remained until his death. He was the oldest practicing physician in Genesee County. He was a former president of Mt. Morris when it was a village and also served on the local Board of Education. Dr. Graham died after a short illness in Hurley Hospital on January 10, 1943.

WAR BULLETIN

SELECTIVE SERVICE MEMORANDUM

Selective Service, Michigan headquarters, issued a memorandum, February 10, 1942, directing the induction of registrants with venereal disease, effective February 15:

1. Registrants now being processed who have a positive serological blood test may be classified in Class 1-A, if otherwise acceptable, and may be delivered for induction on or after February 15, 1943, *with the exception of those cases outlined in paragraph 2 below.*

2. Registrants previously rejected for the following causes, who are presently classified in Class IV-F, may now be reclassified and *will be acceptable in controlled numbers:* gonorrhea, uncomplicated, acute or chronic, chancroid, uncomplicated, chancre, syphilis *(except all cases previously diagnosed as cardiovascular, cerebrospinal or visceral syphilis).*

Benefits of Membership

The Michigan State Medical Society and its component county societies bring you these valuable benefits of membership:

1. Assurance of a high ethical standing for you in the community, the state and the nation, before the public, the law, and the profession.
2. Postgraduate courses and lectures to keep you in touch with medical progress and to improve professional ability.
3. Your common interests safeguarded through the vigilant work of democratically selected officers and committeemen who are men of your own kind: (a) who know your problems and those of your patients; (b) who serve generously without compensation; (c) who need and ask for your coöperation and advice.
4. Protection against state and national legislation inimical to public interests and advancement of medical science; constructive efforts to initiate beneficial health measures; important contacts to effect the proper administration of existing laws.
5. Information and technical advice in medical-legal matters.
6. Defense of your profession and your source of livelihood against encroachments from without.
7. Authentic information to an inquiring public regarding good medical service and the standing of practitioners.
8. A monthly Journal of high quality with the latest scientific literature, and general information important to you.
9. Personal service of your Executive Office in Lansing in matters associated with your practice of medicine.
10. Your medical societies act as sales ambassadors of the medical profession in your community and the State.

The returns you receive from membership in the Michigan State Medical Society are almost unlimited. Your destiny is intimately related to the success of your county, state and national medical organizations.



APPLE BOWL MAGIC

FOR THE FAMILY

Apples recommended for Health by ANGELO PATRI, Well-known Educator, in Recent Newspaper Article

"The apple has all the qualities a good fruit ought to have. It has lovely colors. There isn't a fruit in the world to compare in color with a Rome Beauty, a red McIntosh, a golden Delicious. It has perfume that puts the scents of other fruits to shame. It has food values, vitamins, flavor, digestibility, everything a good fruit should have in plenty. And it is cheap.

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FOR JUICE . . . FLAVOR . . . HEALTH

MICHIGAN'S DEPARTMENT OF HEALTH

H. ALLEN MOYER, M.D., Commissioner, Lansing, Michigan

LEELANAU LATEST TO GET FULL-TIME HEALTH SERVICE

Sixty-eighth Michigan county to obtain services of a full-time health department, Leelanau County is now linked with adjoining Grand Traverse County in a new district organization. The Grand Traverse County department has functioned since April, 1939.

Leelanau is the second Michigan county to get full-time health services since the first of the year, St. Clair County supervisors having voted earlier to establish a county department.

HELP SERVICE FAMILIES BY SPEEDING REGISTRATION

Delays in the registration of births of infants whose fathers are in the armed forces can cause hardships for the mothers whose increased allotment checks are held up until proofs of birth are submitted. Such failures to report births within the five-day period fixed by law also cause needless trouble and worry to service men who want to arrange such increased allotments.

The state health department furnishes without cost to service men the certified copies of birth records which they use in arranging for increased money allowances to their families.

VD EXAMINATION RULE RELAXED FOR SERVICEMEN

County clerks may now accept the signed statements of medical officers of the armed forces that examinations of applicants to marry have shown them to be free of venereal disease. Heretofore applicants have been required to present such statements on the standard form supplied by the Michigan Department of Health.

There is no relaxing of the regulation that such examinations shall have been made within thirty days of the time applications for marriage licenses are presented and civilian applicants still must present physicians' statements on the required form. Army, Navy, U. S. Public Health Service and state health department laboratory findings in the case of servicemen are acceptable.

1942 AUTOMOBILE TOLL SMALLEST IN NINE YEARS

The 1,295 total of deaths in motor vehicle accidents during 1942, reported by the Michigan Department of Health, was the smallest toll in nine years. Not since 1933 have so few deaths been reported for a 12-month period. The total then was 1,278. Highest traffic toll to date was reported for 1937 when 2,187 persons lost their lives as the result of motor accidents.

Last year's loss of lives represents a 23.4 per cent decline from the five-year average of 1,819 deaths for the period 1937-1941.

A marked falling off in motor vehicle deaths is noted for the last three months of 1942 as compared with the five-year average for the period, the 266 deaths reported for last October, November and December having been 48.8 per cent below the 545 median.

REQUEST QUICK RETURN OF VD QUESTIONNAIRES

The Michigan Department of Health has distributed questionnaires to certain physicians in an attempt to determine the treatment status of each Selective Service registrant rejected for venereal disease. Distribution has been limited to physicians known to treat venereal disease as judged by case reports to the state health department and a further effort has been made to limit the distribution to physicians still remaining in civilian practice.

This information has been requested by Congress and must be forwarded to the U. S. Public Health Service by the Michigan Department of Health on or before March 15, 1943. Physicians receiving the questionnaire are requested to submit information by March 1, so that the necessary tabulations can be prepared for the Service.

MENINGOCOCCIC MENINGITIS INCREASE IS STATEWIDE

A statewide increase in the incidence of meningococcic meningitis is reported by the state health department's Bureau of Epidemiology, with thirty-nine cases listed since January 1. Expectancy for the period is three cases.

Case fatality is relatively low, probably due to the use of combined therapy, sulfathiazole or sulfadiazine plus antimeningococcic serum.

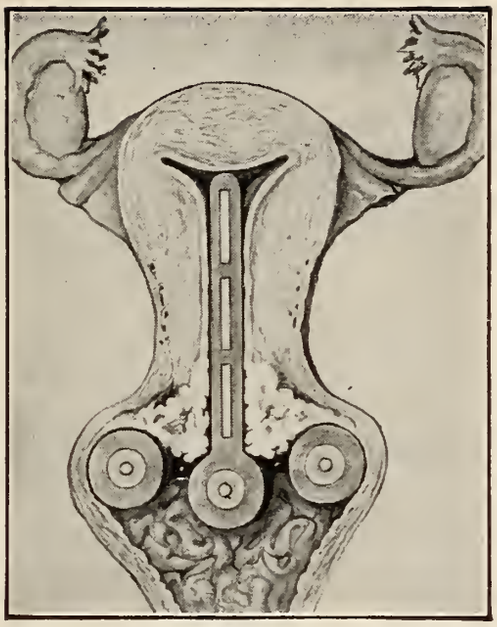
Increase in whooping cough also is noted with 1,350 cases reported in January and 638 cases during the first half of February.

NINETEEN NURSES IN TRAINING FOR PUBLIC HEALTH WORK

A wartime shortage of public health nurses in Michigan will be met in part, at least, when nineteen registered nurses complete a refresher course arranged by the Bureau of Public Health Nursing and are assigned to duties in rural areas served by full-time county and district health departments.

The nineteen nurses come from homes in Michigan as distant from Lansing as Manistique and Escanaba. First two weeks of February were devoted to classwork in Lansing and the nurses now are receiving field training in health departments of Calhoun, Ingham, Monroe, Alger, Schoolcraft, Genesee, Wexford, Kalamazoo and Saginaw counties.

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COUNTY AND PERSONAL ACTIVITIES

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Manistee County—C. L. Grant, M.D., Secretary
Menominee County—Wm. S. Jones, Secretary
Muskegon County—Helen Barnard, M.D., Secretary
Shiawassee County—I. W. Greene, M.D., Secretary
St. Joseph County—R. J. Fortner, M.D., Secretary
Ontonagon County—W. F. Strong, M.D., Secretary

The above county medical societies have certified 1943 dues for every member of their respective societies, to be the first 100 per cent paid-up counties for this year. Michigan State Medical Society dues for 1943 are $12.00.

A membership record was established in 1942 when the total number of Michigan State Medical Society members reached an all-time high of 4,714.

Lt. Colonel G. L. Hagelshaw, M.C., writes from North Africa: "I enjoy every copy of the MSMS Journal I receive." Colonel Hagelshaw was one of the first physicians to leave Bay City for service in the armed forces.

* * *

The University of Vermont Medical Librarian writes as follows: "*The Journal of the Michigan State Medical Society* is a fine journal and we have wished that we had available funds to purchase back volumes and add them to our library."

* * *

The American College of Surgeons began a series of twenty War Sessions on March 1, held throughout the United States. The Michigan session was held March 8 at the Statler Hotel, Detroit, and presented new developments in military and civilian medical and hospital service.

* * *

Lt. Colonel Carl Hanna, M.C., Surgeons Office, APO 927, San Francisco, California, writes from Australia: "I have enjoyed reading of the MSMS meeting last fall in the November number which just came a couple of days ago. Give my regards to Claude Keyport; also Roy Perkins, Urmston and Slattery."

* * *

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worth near Woodward, Detroit, and is part of the University of Michigan Postgraduate School. It will be the scene of the *"Industrial Medical and Surgical Clinic"* of Thursday, April 8, sponsored by the Michigan State Medical Society and the U. of M. Postgraduate Medical Education Department. The cover illustration is from "The Horace H. Rackham Educational Memorial," Vol. XLVIII, Summer 1942, page 325.

* * *

The 1943 MSMS Annual Meeting will be held at the Statler Hotel, Detroit, September 22, 23, 24. It will be the second Postgraduate Conference on War Medicine sponsored by the State Society. Twenty-two out-of-Michigan guest essayists, together with a number of eminent Michigan lecturers, will be on the program.

* * *

"Doctors Are Scarce—Use Them Sparingly!" This was the title of an article in the *Bay City Times* of Sunday, February 14. It followed the plea of the county medical society for the public's continued cooperation and patience during these war times, when so many doctors of medicine are serving with the armed forces.

* * *

The Luce County Medical Society contributed $136.10 to the District Department of Health No. 6 for additional clerical help in the Luce County office. The donation represented the token payment received by Luce County physicians from the Michigan Department of Health for free smallpox and diphtheria protective treatments to indigent children.

* * *

Michigan physicians in age groups.—The American Medical Association records give the following interesting figures concerning Michigan physicians:

899 general practitioners and 796 specialists in the age group from 18-37 years;

581 general practitioners and 966 specialists in the group from 38-44 years;

410 general practitioners and 907 specialists in the group from 45-54 years;

1157 general practitioners and 763 specialists in the group of 55 years and over.

* * *

The Wayne County Medical Society's Hospital Relations Committee, together with the Health Council of Metropolitan Detroit and the Detroit District Hospital Council, developed a questionnaire, sent to all members of the Wayne County Medical Society, in an attempt to find out the hospital situation in metropolitan Detroit as it affects the welfare of patients. Among other questions it asked:

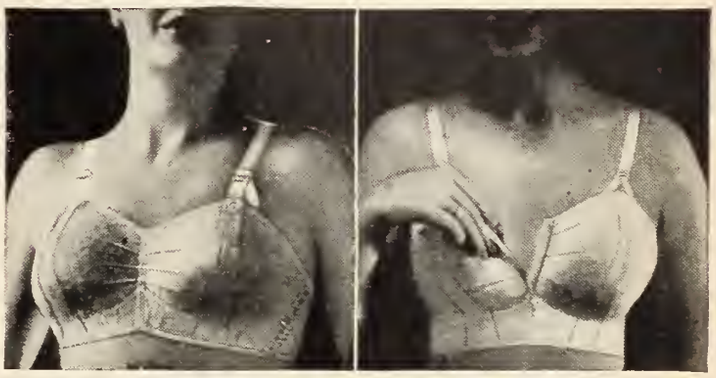
In your opinion is there a shortage of hospital beds in Wayne County?

Have you been unable to get a hospital bed for a patient (emergency case?; elective case?)?

If you are not a member of a hospital staff, have you been denied hospital appointment?

Do you favor a central bureau of hospitals to register vacant beds each day for your patients' use?

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The Mt. Carmel Mercy Hospital, Detroit, held a Victory Clinic Day on January 27. Over 250 physicians were in attendance. On the program were Harold A. Morris, M.D., and Samuel A. Flaherty, M.D., Detroit, Wm. L. Bendel, M.D., Monroe, Louisiana, Carl E. Badgley, M.D., Ann Arbor, Wm. Reid Morrison, M.D., Boston, Massachusetts, Charles F. McKhann, M.D., Ann Arbor, Edgar H. Norris, M.D., Detroit, Fay LeFevre, M.D., Cleveland, Ohio, Irving Potter, M.D., Buffalo.

The Staff officers of Mt. Carmel Mercy Hospital are Charles W. Husband, M.D., Chief of Staff; Louis J. Gariepy, M.D., Vice Chief, and Carl S. Ratigan, M.D., Secretary-Treasurer.

* * *

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M. & R. Dietetic Laboratories, Columbus, Ohio
McKesson Appliance Company, Toledo, Ohio
McNeil Laboratories, Inc., Philadelphia, Pennsylvania
Mead Johnson & Company, Evansville, Indiana

The ten firms listed above were among the exhibitors at the 1942 MSMS annual meeting in Grand Rapids and helped make possible for your enjoyment one of the outstanding state medical meetings in the country. Remember your friends when you have need of equipment, medical supplies, appliances or services.

* * *

The Michigan Pathological Society held its bimonthly meeting on February 13, 1943, at Grace Hospital, De-

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troit, in joint session with the Detroit Dermatological Society.

A seminar on "Lesions of the Skin" was presented by the members of the Michigan Pathological Society. Presentations were given by F. W. Hartman, M.D., Detroit; R. C. Wanstrom, M.D., Ann Arbor; L. Berman, M.D., B. E. Stofer, M.D., D. C. Beaver, M.D., G. Steiner, M.D., D. H. Kaump, M.D., all of Detroit; and S. E. Gould, M.D., Eloise.

Dinner was held in the club rooms of the Wayne County Medical Society.

The next meeting will be held at the Herman Kiefer Hospital, Detroit, on April 10, 1943. The subject will be "Diseases of the Lymphatic System."

* * *

G. Foard McGinnes, M.D., has been appointed director of Medical and Health Service of the Midwestern Area of the American Red Cross with headquarters in St. Louis, Missouri. Dr. McGinnes succeeds Dr. Howard Mettel who died on November 30, 1942. Dr. McGinnes comes to the American Red Cross from the Tennessee Department of Public Health where since 1929 he was Director of Venereal Disease Control Service, Associate Professor of Preventive Medicine of the University of Tennessee, and Chief of the Department of Syphilology, Meharry Medical College. Previous to 1929 he was with the Virginia State Department of Health, Director of Bureau of Communicable Diseases.

* * *

The Michigan State Board of Registration in Medicine recently received the following inquiry from a physician:

"Prior to obtaining a license to practice medicine in this state, am I legally authorized to accept payment for medical services rendered?"

The State Board replied as follows: "Until you obtain a license to practice in this State you could not legally contract to perform any medical services in this State and therefore it would be quite out of order for this Board to sanction such practice or recommend the payment of any fees therefor. This Board of course is not a Court of Law to pass on the legality of your bill and will not enter into any question as to payment except to state that the reading of any x-ray films or reports upon which any diagnosis or treatment was based could not be legally done prior to the date of your receiving your license."

* * *

The Council of the Michigan State Medical Society, by authority of the House of Delegates, has ruled that active members of the Michigan State Medical Society in good standing with MSMS dues paid *for the immediately preceding full year,* who are serving their country in the armed forces of the United States will be relieved of paying MSMS dues during the period of such active service, if recommended by the county medical society. Members who have already paid



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their dues for the current year and during that year are called into active military service shall be accorded, upon their return home, membership without the payment of MSMS dues for the remainder of the calendar year of their return, provided they receive at least six months—i.e., not less than six months nor more than a year—of free membership.

It is to be understood that such relief from the payment of MSMS dues can only be accorded physicians who have already been members of the Michigan State Medical Society and have paid dues for at least one year.

Newly elected members must pay one year's dues in order to be eligible for this privilege. Subsequent MSMS dues will then be waived during the period of such members' active military service.

* * *

New Ruling on Mud and Snow Tires.—The Office of Price Administration ruled on February 9, effective February 15, 1943, that certain doctors and other persons may have two mud and snow tires in addition to their five (5) other tires. This Ration Order 1-A reads as follows: "A vehicle that is operated in hazardous services where it may have to be driven at high speed has been made eligible for two tires specially designed for use in mud or snow, in addition to the tires that the vehicle is regularly allowed to have under the rationing regulations."

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FRACTURES & TRAUMATIC SURGERY—Two Weeks' Intensive Course starting April 5.
GYNECOLOGY—Two Weeks' Intensive Course starting April 5; Clinical and Diagnostic Courses.
OBSTETRICS—Two Weeks' Intensive Course starting April 19; Informal Course.
OPHTHALMOLOGY—Two Weeks' Intensive Course starting April 5.
OTOLARYNGOLOGY—Two Weeks' Intensive Course starting April 19.
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THE DOCTOR'S LIBRARY

Acknowledgment of all books received will be made in this column and this will be deemed by us as a full compensation of those sending them. A selection will be made for review, as expedient.

OPHTHALMOLOGY AND OTOLARYNGOLOGY. Prepared by the Subcommittees on ophthalmology and otolaryngology of the committee on surgery of the division of medical sciences of the National Research Council. Illustrated. Philadelphia and London: W. B. Saunders Company, 1942.

The Medical departments of the United States Army and Navy have appreciated the necessity for all doctors to be able to render assistance in acute emergencies where specialists are not available, so have had several military surgical manuals prepared. This is one of them and is a very precise and well written manual for the eye and ear, nose and throat fields. It is profusely illustrated, procedures outlined with detail, and diagnosis given very special attention. Tests for hearing and for malingering are given, also the ear in aviation, and the various tests involved. The book is sufficiently complete to be a very valuable handbook, but not a textbook. It has 303 pages.

ORTHOPEDIC SUBJECTS. Prepared and edited by the Subcommittee on Orthopedic Subjects of the Committee on Surgery of the Division of Medical Sciences of the National Research Council, George E. Bennett, Chairman. Philadelphia and London: W. B. Saunders Company, 1942.

At the request of the Surgeons General of the Army and of the Navy the National Research Council has supervised the preparation of six manuals on special surgical subjects. These manuals were necessary due to the enormous increase of personnel of those two departments and the necessity of making available to them all the knowledge possible on these essential subjects. These books are prepared with consideration of the marked specialization of medicine since the last war, and the need now for these men to be able to do work in other fields, as occasion arises and medical men of the proper specialty are not immediately available. This series of books has been wonderfully successful. Diagnosis and treatment receive most particular attention. Necessary illustrations are given, with careful detail. The first section has several chapters on ununited fractures by Paul B. Magnuson. Section two, Injuries of the Spinal Column, by Arthur G. Davis. Section three is Compound Fractures by J. Albert Key, and section four, Osteomyelitis, also by J. Albert Key. This volume is up to the standard of the others, a very handy and authoritative manual.

COUNCIL ON PHARMACY AND CHEMISTRY of the American Medical Association. Annual report for 1941. Chicago: American Medical Association, 1942.

The annual reports of the Council on Pharmacy and Chemistry is a volume containing the statements authorized by the committee, most of which have been printed in THE JOURNAL, but in addition certain others included here for a matter of record. These reports are largely actions removing from the lists of New and Nonofficial Remedies certain preparations that for



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some reason cease to comply with standards, or for other causes set forth in the individual report. Other reports are given of meritorious preparations which may not be deemed of sufficient value or necessity for inclusion in N.N.R. There are also reports of other action, such as an appreciation of Professor Charles Wallis Edmunds of the University of Michigan, and an article on Ion transfer of medicaments. It is a book of reference.

THE PATHOLOGY OF TRAUMA. By Alan Richards Moritz, M.D., Professor of Legal Medicine, Harvard Medical School; Lecturer in Legal Medicine, Tufts College Medical School; Lecturer in Legal Medicine, Boston University School of Medicine; Pathologist, Massachusetts State Department of Public Safety; Consulting Pathologist, Massachusetts State Department of Mental Health; Associate Medical Examiner of Suffolk County. Illustrated with 117 engravings. Philadelphia: Lea & Febiger, 1942. Price: $6.00.

The author has satisfactorily prepared a comprehensive treatise devoted to the pathogenesis, pathological anatomy, histology and sequelæ of mechanical violence. This volume is especially timely due to the increase of injuries by violence as a result of the armed conflict. There is assembled much information on related subjects which formerly entailed reviewing a great deal of the literature. In the first chapter under general consideration, the author discusses the physics or mechanics of trauma which is informative as well as practical. With this as a basis, the classification and discussions of the reaction to injury and the various types of wounds produced by mechanical injury follow. In the production of gunshot wounds the ammunition used, the velocity of the missile, distance from which the gun is fired, the type of tissue penetrated and other factors which are so important in military medicine are described and illustrated. Chemical tests for the identification of powders are set forth. The resulting injuries from detonation of high explosives is briefly outlined.

A chapter on the ever controversial subject of trauma and tumor in forensic medicine is appropriately included in this work. The subsequent chapters are devoted to the mechanical injuries to the various systems of the body, most commendable of these is one dealing with the central nervous system.

This is an excellent book and is recommended to the pathologist and clinician alike.

THE ANTIGONADOTROPIC FACTOR, with consideration of the antihormone problem. By Bernhard Zondek and Felix Sulman, Hebrew University, Jerusalem. 185 pages. Baltimore: The Williams and Wilkins Company, 1942. Price $3.00.

In 1921-22, treatment of female infantile rats with anterior pituitary extract induced marked changes in the corpus luteas. Later Zondeck discovered the gonadotropic effect of implantations of hypophyseal substances. Studies beginning at that time have given the medical world an almost new field of endeavor. This monograph is a detailed study of the antigonadotropic factor, its effects, preparation, and properties.

The clinical significance of the "antihormones" is a chapter of deep interest, involving insulin, adrenaline, parathyroid hormone, vasopressin, sex hormones, cortin, renin, thyroid hormone, etc. Tables are given of tests and results. This study of "antihormones" is intriguing.

A final chapter discusses the mechanism of the antigonadotropic reactions. The bibliography covers fifteen pages. There are no illustrations. The book is printed in large clear type on nongloss paper, and the style is good. A valuable treatise.

THE PRINCIPLES AND PRACTICE OF MEDICINE. Originally written by Sir William Osler, Bart, M.D., F.R.C.P., F.R.S. Designed for the use of practitioners and students of medicine, by Henry A. Christman, A.M., M.D., LL.D., Hon. Sc.D., Hon. F.R.C.P. (Can.), F.A.C.P., Hersey Professor of the Theory and Practice of Physics, Emeritus, Harvard University. New York: D. Appleton-Century Company, Inc., 1942. Price $9.50.

Osler's Practice of Medicine has set the standard for fifty years. Osler himself produced the first nine editions. Thomas McCrae of Jefferson Medical School, Philadelphia, edited the 10th, 11th and 12th editions. The present editor did the last two. The Osler form and method of teaching has been continued, by a single editor. New advances are included. The book has been enlarged to 1479 pages. Printed on thin paper. The type is large, easily readable. Each section is followed by a list of references for study.

Etiology, Pathology and Symptoms as in every edition of Osler are emphasized, given in much detail. Treatment has been frankly handled, if not much hope it says so, but offers suggestions. We like this edition.

FRACTURES. By Paul B. Magnuson, M.D., F.A.C.S. Associate Professor of Surgery, Northwestern University Medical School; Attending Surgeon, Passavant Memorial Hospital and Wesley Memorial Hospital, Chicago. 317 Illustrations. Fourth Edition Revised. Philadelphia: J. B. Lippincott Company, 1942. Price $5.50.

"Splint 'em where they lie," "Shock is caused by fractures and is made worse by handling." Magnuson emphasizes this fact, that too much damage frequently is done a patient before a chance is had to help him. His first chapter starts out with a group of such axioms as quoted above. Fractures are described, many illustrated, and the principles of reduction and treatment given. Operative treatment where necessary is given in detail, with illustrations and discussion of methods of procedure.

This is a well developed book of over 500 pages, and includes 30 pages of bibliography. It has reached its fourth edition in less than ten years, which indicates its value. It is clear in style and a pleasure to read.

THE HAND, ITS DISABILITIES AND DISEASES. By Condict W. Cutler, Jr., M.D., F.A.C.S. Associate Surgeon Roosevelt Hospital, New York; Consulting Surgeon, New York Dispensary; etc. 274 Illustrations. Philadelphia: W. B. Saunders Company, 1942. Price $7.50.

Essentially all surgical conditions of the hand are described, with the practical treatment of each one. This book is exceptionally well conceived and executed. Anatomy of the hand, which is so absolutely necessary, is given a chapter. Infections, their diagnosis and treatment, is followed by chapters on contusions, abrasions, lacerations and incisions, puncture wounds, foreign bodies, fractures, amputations. Tendon and nerve surgery is exceptionally well treated.

We like the book. As a whole it is an adequate

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guide for the industrial surgeon or other who must salvage broken hands. It is concise, but in sufficient detail.

PROBLEMS OF AGING. Second Edition. A publication of the Josiah Macy, Jr., Foundation. Edited by E. V. Cowdry, Washington University, St. Louis, with 37 listed contributors. Baltimore: The Williams & Wilkins Company, 1942. Price $10.00.

Geriatrics, the study and treatment of the aged, is of increasing interest to the medical profession as indicated by this voluminous volume. A survey of arteriosclerosis was the underlying inspiration for the first edition published in 1933. Several organizations sprang up interested in the problem of aging, meetings were held and Geriatrics was in being. Several chapters are given over to aging of plants, insects, and vertebræ; also of certain organs and tissues. Thirty-seven contributors have prepared chapters.

Individual organs and their processes of aging are discussed. The volume is most complete, little if anything being omitted. Each chapter is followed by a full bibliography. One interested in this subject should find everything here he wishes to consult.

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WAR BULLETIN

Dr. Warren E. Bow, president of Wayne University, conferred degrees upon sixty-nine graduates of the College of Medicine at a special commencement held March 4 at 10:30 a.m., in the Rackham Educational Memorial. Listed among the candidates are three women: Elizabeth Thorndike Endicott, Chestfield Road, Bloomfield Hills; H. Marjorie Peebles-Meyers, 2019 St. Antoine; and Elizabeth Reed, 7601 Dexter.

Because the degree of bachelor of medicine, usually granted upon the successful completion of the academic curriculum, has been abolished, all sixty-nine graduates will become doctors of medicine at this time. In the past, it has been customary to confer the doctor's degree only upon completion of a year's internship by the candidate.

Measures already adopted by Wayne to meet the existing shortage of trained men and women include accelerated courses in nursing and in medicine. The degree course in nursing, which formerly covered five years, may now be completed in four, while the requirements for entrance to the Medical School have been cut from three to two years. Although no courses have been removed from the curriculum leading to the doctor's degree in medicine, the establishment of summer courses has materially shortened the over-all time required to qualify for the degree, University authorities state.

The Board of Education at its last meeting approved an agreement executed between Wayne University and the executive secretary of the United States Office of Scientific Research which provides that federal funds, not to exceed $58,766, be granted to the College of Medicine to continue the study of contaminated wounds.

The Board also accepted the sum of $600 from the Lakeside Laboratories, Inc., to be expended for toxicity tests. The project is under the direction of Dr. Charley J. Smyth, instructor in clinical medicine, and Dr. Fredrick F. Yonkman, professor of pharmacology and therapeutics.

Senate Bill 739 has passed the Senate and House, providing that during the present war and for six months thereafter personnel of all components of the Army of the United States may be detailed as students at technical, professional and other educational institutions, or as students, observers or investigators at industrial plants, hospitals and other places.

The International College of Surgeons will hold its Fourth International Assembly June 14, 15, 16, at the Waldorf Astoria Hotel, New York City. Eminent surgeons in government military and civilian executive offices approved of the meeting of the assembly.

COUNTY MEDICAL SOCIETY MEETINGS

Bay—February 24, 1943—Speaker: A. R. McKinney, M.D. Subject: Ophthalmology in General Practice."

March 10, 1943—Speaker: William Clift, M.D., Subject: "Roentgenology."

Calhoun—March 2, 1943—Hart Hotel—Speaker: Gordon Myers, M.D. Subject: "Syncope."

Dickinson-Iron—March 11, 1943—Crystal Inn—Speaker: A. H. Miller, M.D.

Genesee—February 23, 1943—Elks' Club—Surprise Meeting.

March 9, 1943—Elks Club—Business Meeting.

March 23, 1943—Elks Club—Speaker: Conrad R. Lam, M.D. Subject: "The Clinical Use of the Anticoagulents Heparin and Dicumarol."

Ingham—March 16, 1943—Hotel Olds —Speaker: George L. Waldbott, M.D. Subject: "Some Problems of Allergy."

Kalamazoo—March 16, 1943—Public Library Bldg.—Speaker: Lt. Col. Robert H. Kennedy, M.C. Subject: "Treatment of Wartime Injuries."

Kent—March 9, 1943—Browning Hotel—Speaker: Herbert I. Kallet, M.D. Subject: "Chronic Ulcerative Colitis."

Jackson—February 16, 1943—Hotel Hayes Ballroom—Speaker: Norman F. Miller, M.D., F.A.C.S.

March 16, 1943—Hotel Hayes Ballroom—Speaker: George J. Curry, M.D., F.A.C.S. Subject: "The Management of Lower Extremity Fractures."

Oakland—March 3, 1943—Kingsley Inn—Speaker: A. C. Curtis, M.D. Subject: "What to Do with a Patient with a Positive Serology."

St. Clair—March 23, 1943—Hotel Harrington—Speakers: H. Allen Moyer, M.D., and E. V. Thiehoff, M.D.

Washtenaw—March 9, 1943—Michigan Union—Speakers: Mark Marshall, M.D., and Henry Ransom, M.D. Subject: "Peptic Ulcer."

Wayne—March 15, 1943—Art Institute—Speaker: Frederick I. Lewis, M.D., F.R.C.S. Subject: The Management of Non-Union Following Fractures of the Neck of the Femur."

West Side Medical Society met March 17, 1943—Speaker: Warren B. Cooksey, M.D. Subject: "Blood Plasma in Wartime."

COUNCIL AND COMMITTEE MEETING

March 7, 1943—Professional Liaison Committee—Statler Hotel, Detroit.

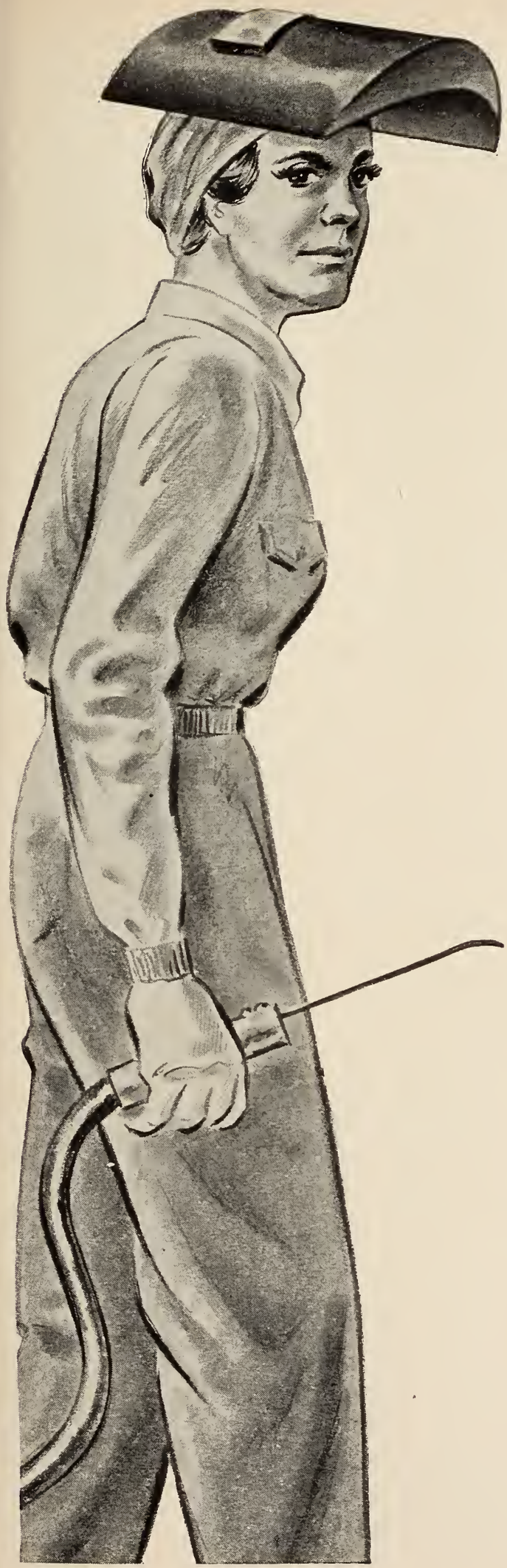
March 11, 1943—Legislative Committee—Hotel Olds, Lansing.

March 17, 1943—Medical Preparedness Committee—Statler Hotel, Detroit, Executive Committee of The Council—Statler Hotel, Detroit.

March 18, 1943—Industrial Health Committee—Statler Hotel, Detroit.

The *Oakland County Medical Society Bulletin* contains a page entitled "Post 'Scrips' from the Boys." This contains brief news items on O.C.M.S. members in Service, across the seas, in the states, as well as news notes on the home front.

"How to Use Visual Aids" by Sheldon M. Hayden, M.D., was published in the January, 1943, *Michigan Extension News*, a publication of Michigan State College. This describes briefly the "Do's" and "Don'ts" in using illustrative objects when speaking before an audience. The suggestions are worth while reading—and following.



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Motion pictures on various scientific subjects are available to County Medical Societies on a loan basis. Requests for films should be instituted as far in advance as possible, so that the proper reservations may be made. The exact shipping addresses and dates should be given at the time of the request; also the type of apparatus in which the film is to be run. Responsibility for the projection and care of the film must be borne by the County Society borrowing it. Projectors are to be supplied by the County Society. In many cases, the only expense incurred is that of transportation both ways.

Several organizations and firms advise that they have in preparation a number of films which will be available for loan to county medical societies. As these and other motion pictures are invited to the attention of the Michigan State Medical Society, full information will be published in the MSMS JOURNAL from time to time.

The incomplete list of motion pictures includes:

Dynamics of Respiration
*S—C—16—2, ea. 400′—Owner AMA
Regional Anesthesia for Operations on the Neck
S—16—1—400′—Owner AMA
Signs of Inhalation Anesthesia
S—16—2, 300′ ea.—Owner AMA
Technique of Blocking Sacral Nerve
S—16—1,400′—Owner AMA
The Technique of Carbon Dioxide Absorption in Anesthetic Atmospheres
S—16—2, 400′ ea.—Owner AMA
The Role of Carbon Dioxide in Convulsions During Anesthesia
S—16—1—200′—Owner AMA
Cancer—(Canti Cancer Film)
S—35—3—Produced by Dr. R. G. Canti, London, England
Medical History in Clinical Teaching
S—16—2, 300′ ea. Prepared by Department of Cardiology, Women's Medical College, Philadelphia
Comparative Physiology of Labor
S—16—4, total about 1400′. Produced by Prof. K. deSnoo

OTOLARYNGOLOGY

The Hygiene of Swimming
S—16—1—400′—Owner AMA

PHYSICAL THERAPY

Aids in Muscle Training
S—16—1—300′—Owner AMA
Contraction of Arteries and Arterio-Venous Anastomoses
S—16—1—250′—Owner Dr. E. R. Clark, University of Pennsylvania
Effects of Heat and Cold on the Circulation of the Blood
S—16—1—300′—Owner Dr. E. R. Clark, University of Pennsylvania
Effects of Massage on the Circulation of the Blood
S—16—1—200′—Owner Dr. E. R. Clark, University of Pennsylvania
Massage
S—16—1—100′—Owner AMA
Occupational Therapy
S—16—1—300′—Owner AMA
Underwater Therapy
S—16—1—400′—Owner AMA
Syphilis—A Motion Picture Clinic
Sound—35—9 reels; also 16 mm, 2 large reels, 1600′ ea. Time 1½ hrs.—Owner AMA
The Hygiene of Swimming
S—16—1—400′—Owner AMA
The Story of "Lyovac" Normal Human Plasma
So—C—RT: 35—Owner: Sharp & Dohme, Detroit, Mich.

*Definition of Symbols

S—Silent	16 or 35—millimeters
So—Sound	1 or 2, etc.—No. of reels
C—Colored	RT—Running time

Hypodermic Syringes and Needles; Their Care and Function.
*S—C—16—RT—62—Owner: The Hospital Service Department, Becton, Dickinson & Co., Rutherford, N. J. (This film has six reels; divided by text, two reels each; any two may be shown as complete picture).
The Basic Requirements for Good Syringes and Needles. RT: 22
The Care and Sterilization of Hypodermic Syringes and Needles. RT: 22
Uses and Simple Injection Techniques of Hypodermic Syringes and Needles. RT: 18
Varicose Veins and Their Complications by Richard E. Heller, M.D.
C-16—Owner: The Hospital Service Department, Becton, Dickinson & Co.
Peptic Ulcer
So—C—16—1600′—RT: 45—Owner: John Wyeth & Bros., Inc. Philadelphia
The Technique of Male Hygiene
So—16—400′—RT: 12—Owner: John Wyeth & Bros,. Inc., Philadelphia
Treatment of Trichomonas Vaginalis Vaginitis
S—C—16—400′—RT: 12—Owner: John Wyeth & Bros., Inc., Philadelphia
Pentothal Sodium for Intravenous Anesthesia
S—C—16—1200′—RT: 30—Owner: Abbott Laboratories, Chicago
The Liquid Life Line
S—C—16—800′—RT: 25—Owner: Abbott Laboratories, Chicago
Treatment of Vaginalis Vaginitis with Cinquarsen
S—16—500′—RT: 15—20—Owner: Holland-Rantos Co., Inc., New York
Amebiasis
S—16—RT: 30—Owner: Eli Lilly & Co., Indianapolis
The Anemias
S—16—RT: 25—Owner: Eli Lilly & Co., Indianapolis
Thiamine Chloride Deficiency
S—C—16—RT: 25—Owner: Eli Lilly & Co., Indianapolis
Riboflavin Deficiency
S—C—16—RT: 35—Owner: Eli Lilly & Co., Indianapolis
Nicotinic Acid Deficiency
S—C—16—RT: 35—Owner: Eli Lilly & Co., Indianapolis
Sub-Clinical Aspects of Vitamin B Complex Deficiencies.
So—C—16—1200′—RT: 32—Owner: E. R. Squibb & Sons, New York
Also
S—16—3—4000′—Owner: E. R. Squibb & Sons, New York

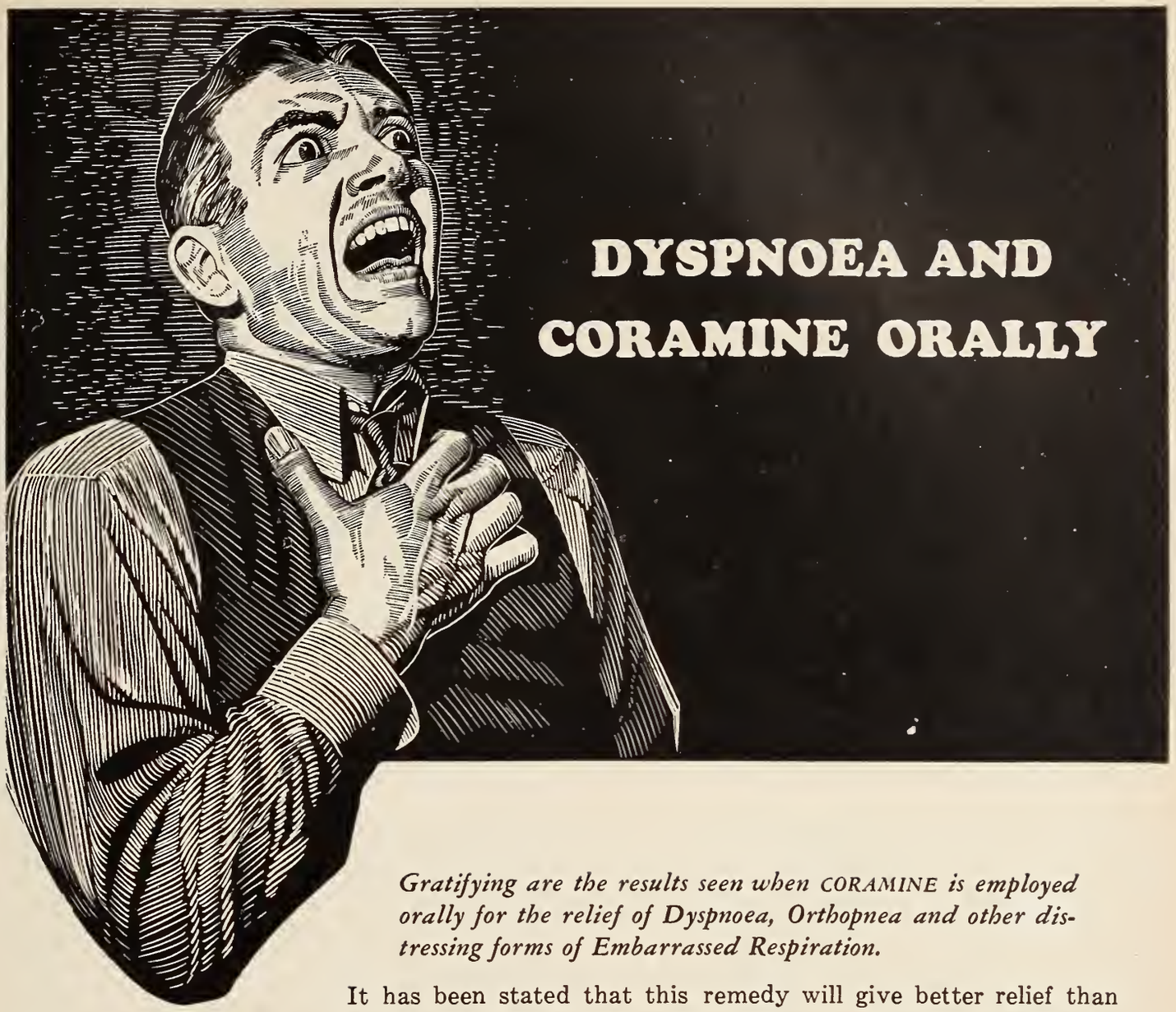
SURGERY

Knee Surgery
S—16—36′—RT: 12—Owner: Mead Johnson & Co., Evansville, Ind.
Gastric Ulcer
S—16—239′—RT: 9—Owner: Mead Johnson & Co., Evansville, Ind.
Goiter Surgery
S—16—462′—RT: 16—Owner: Mead Johnson & Co., Evansville, Ind.
Bone Grafting in the Lumbosacral Spine
S—16—395′—RT: 14—Owner: Mead Johnson & Co., Evansville, Ind.
Bone Grafting in the Lumbar Spine
S—16—232′—RT: 8—Owner: Mead Johnson & Co., Evansville, Ind.
Plastic Surgery
S—16—2—570′—RT: 20—Owner: Mead Johnson & Co., Evansville, Ind.
Restoration of Function in Cases of Harelip
S—16—369′—RT: 13—Owner: Mead Johnson & Co., Evansville, Ind.
The Administration of Oxygen by Oro-Pharyngeal Catheter
S—16—375′—RT: 13—Owner: Mead Johnson & Co., Evansville, Ind.
The Treatment of Empyema (Suppurative Pleuritis)
S. or So—C—16—3—925′—RT: 32—Owner: Mead Johnson & Co., Evansville, Ind.
Technic of Blood Transfusion
S—16—2—725′—RT: 25—Owner: Mead Johnson & Co., Evansville, Ind.

OBSTETRICS

Breech Extraction with Forceps
S—16—2—514′—RT: 18—Owner: Mead Johnson & Co., Evansville, Ind.
Breech Presentation with Manual Aid
S—16—457′—RT: 16—Owner: Mead Johnson & Co., Evansville, Ind.

(Continued on Page 252)



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[1]Lankford, J. S., "Coramine," Clinical Medicine & Surgery, 37, 670, 1930.

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SUMMIT, NEW JERSEY

(Continued from Page 250)

Left Mediolateral Episiotomy and Repair
S—16—220′—RT: 8—Owner: Mead Johnson & Co., Evansville, Ind.
Normal Delivery
S—16—348′—RT: 12—Owner: Mead Johnson & Co., Evansville, Ind.
Intracranial Injuries of the Newborn
S—16—450′—RT: 16—Owner: Mead Johnson & Co., Evansville, Ind.
A Low Cervical Cacsarean Section
S—16—300′—RT: 11—Owner: Mead Johnson & Co., Evansville, Ind.
Resuscitation of the Newborn
S—16—350′—RT: 12—Owner: Mead Johnson & Co., Evansville, Ind.
Roentgen Pelvimetry
S—16—2—800′—RT: 28—Owner: Mead Johnson & Co., Evansville, Ind.

PEDIATRICS
Differential Diagnosis of Vomiting in Newborn
S—16—3—908—RT: 32—Owner: Mead Johnson & Co., Evansville, Ind.
Technique of Breast Feeding
S—16—306′—RT: 11—Owner: Mead Johnson & Co., Evansville, Ind.
Miscellaneous Pediatric Cases
S—16—2—700′—RT: 24—Owner: Mead Johnson & Co., Evansville, Ind.
Pediatric Nursing Technique
S—16—314′—RT: 11—Owner: Mead Johnson & Co., Evansville, Ind.
Some Diagnostic and Therapeutic Procedures
S—16—405′—RT: 14—Owner: Mead Johnson & Co., Evansville, Ind.
Obstructive Laryngitis
S—16—263′—RT: 9—Owner: Mead Johnson & Co., Evansville, Ind.
Tuberculosis in Childhood
S—16—275′—RT: 10—Owner: Mead Johnson & Co., Evansville, Ind.

ALLERGY
S—16—3—1300′—RT: 46—Owner: Mead Johnson & Co., Evansville, Ind.
Orthopedic Treatment of Infantile Paralysis
S—16—2—650′—RT: 23—Mead Johnson & Co., Evansville, Ind.
The Care of the Premature Infant
S—16—2—700′—RT: 25—Owner: Mead Johnson & Co., Evansville, Ind.
The Preparation of Modified Milk Formulæ
So—16—C—380′—RT: 11—Owner: Mead Johnson & Co., Evansville, Ind.
Pneumonia, A Clinic by Isaac A. Abt, M.D.
S—16—C—820′—RT: 22—Owner: Mead Johnson & Co., Evansville, Ind.
When Bobby Goes to School
S—16—C—800′—RT: 25—Owner: Mead Johnson & Co., Evansville, Ind.
Appendicitis in Childhood, Joseph Brennemann, M.D.
S—16—C—1575′—RT: 45—Owner: Mead Johnson & Co., Evansville, Ind.
Erythroblastic Anemia, Thomas B. Cooley, M.D.
S—16—C—580′—RT: 16—Owner: Mead Johnson & Co., Evansville, Ind.
Collection and Preservation of Human Milk
S—16—400′—RT: 14—Owner: Mead Johnson & Co., Evansville, Ind.
Coramine
So—16—C—RT: 40—Owner: Ciba Pharmaceutical Products, Summit, N. J.
Allergic Diseases
S—16—C—2—800′—RT: 35—Owner: Lederle Laboratories, Inc., New York City
Diphtheria and Croup
S—16—3—1200′—RT: 45—Owner: Lederle Laboratories, Inc., New York City
Globulin Modified Antitoxins
S—16—C—3—1200′—RT: 45—Owner: Lederle Laboratories, Inc., New York City
Immunization Against Infectious Diseases
S—16—C—3—1200′—RT: 45—Owner: Lederle Laboratories, Inc., New York City
Pernicious Anemia
S—16—2—800′—RT: 30—Owner: Lederle Laboratories, Inc., New York City
Pneumonia—Diagnosis and Treatment
S—16—C—3—1200′—RT: 40—Owner: Lederle Laboratories, Inc., New York City
Post-Encephalitic Parkinsonism
S—16—2—800′—RT: 25—Owner: Lederle Laboratories, Inc., New York City
Scarlet Fever
S—16—C—3—1200′—RT: 45—Owner: Lederle Laboratories, Inc., New York City
Sulfonamide Therapy
S—16—C—3—1200′—RT: 45—Owner: Lederle Laboratories, Inc., New York City
The Anemias
S—16—C—3—1200′—RT: 45—Owner: Lederle Laboratories, Inc., New York City
Vitamins—and Some Deficiency Diseases
S—16—C—4—1600′—RT: 60—Owner: Lederle Laboratories, Inc., New York City
Encephalomyelitis
S—16—1—400′—RT: 20—Owner: Lederle Laboratories, Inc., New York City
Control of Poultry Diseases
S—16—C—2—800′—RT: 30—Owner: Lederle Laboratories, Inc., New York City
Normal Labor
S—16—3—RT: 30-35—Owner: Petrogalar Laboratories, Inc., Chicago, Ill.
Eclampsia
S—16—3—RT: 30-35—Owner: Petrogalar Laboratories, Inc., Chicago, Ill.
Post Partum Hemorrhage
S—16—3—RT: 30-35—Owner: Petrogalar Laboratories, Inc., Chicago, Ill.
Movements of the Alimentary Tract in Experimental Animals
S—16—1—RT: 15-20—Owner: Petrogalar Laboratories, Inc., Chicago, Ill.
The Influence of Drugs on Gastro-Intestinal Motility
S—16—1—RT: 15-20—Owner: Petrogalar Laboratories, Inc., Chicago, Ill.
The Anatomy of the Abdominal Wall
S—16—1—RT: 15-20—Owner: Petrogalar Laboratories, Inc., Chicago, Ill.
The Story of Cholecystokinin
S—16—1—RT: 15-20—Owner: Petrogalar Laboratories, Inc., Chicago, Ill.
A High Posterior Gastro-Enterostomy
S—16—1—RT: 15-20—Owner: Petrogalar Laboratories, Inc., Chicago, Ill.
Emergency Operations
S—16—1—RT: 15-20—Owner: Petrogalar Laboratories, Inc., Chicago, Ill.
Multiple Diverticula of the Bladder
S—16—1—RT: 15-20—Owner: Petrogalar Laboratories, Inc., Chicago, Ill.
Hydrocele
S—16—1—RT: 15-20—Owner: Petrogalar Laboratories, Inc., Chicago, Ill.
Appendectomy
S—16—1—RT: 15-20—Owner: Petrogalar Laboratories, Inc., Chicago, Ill.
Colles Fracture
S—16—1—RT: 15-20—Owner: Petrogalar Laboratories, Inc., Chicago, Ill.
The Anatomy of the Abdominal Viscera
S—16—2—RT: 30-35—Owner: Petrogalar Laboratories, Inc., Chicago, Ill.
Radium Treatment of Carcinoma of the Cervix
S—16—2—RT: 30-35—Owner: Petrogalar Laboratories, Inc., Chicago, Ill.
Radium Treatment of Mouth Cancer
S—16—2—RT: 30-35—Owner: Petrogalar Laboratories, Inc., Chicago, Ill.
Suspension of the Uterus
S—16—1—RT: 15-20—Owner: Petrogalar Laboratories, Inc., Chicago, Ill.
Vitality for Victory
So—16—C—Owner: The Aetna Casualty and Surety Co., Hartford, Connecticut
Handle With Care
S—16—RT: 25—Owner: The Aetna Casualty and Surety Co., Hartford, Connecticut
Emergency Treatment
S—16—Owner: The Aetna Casualty and Surety Co., Hartford, Connecticut
A Dry Clinic on Sinus Thrombosis
So—16—C—RT: 35—Owner: The Doho Chemical Co., 58 Varick St., New York
Otoscopy in the Inflammations
So—16—C—RT: 30—Owner: The Doho Chemical Co., 58 Varick St., New York
Otitis Media
So—16—C—RT: 35—Owner: The Doho Chemical Co., 58 Varick St., New York
A Clinic on Acute Mastoiditis
So—16—C—RT: 35—Owner: The Doho Chemical Co., 58 Varick St., New York
Suppurative Petrositis, Meningeal
So—16—C—RT: 30—Owner: The Doho Chemical Co., 58 Varick St., New York
Preventing Blindness and Saving Sight
Silent—2 reels—Joint Committee on Health Education, c/o Extension Division, University of Michigan, Ann Arbor
Behind the Shadows (Tuberculosis)
Sound—1 reel—Joint Committee on Health Education, c/o Extension Division, University of Michigan, Ann Arbor
Foods and Nutrition
Sound—1 reel—Joint Committee on Health Education, c/o Extension Division, University of Michigan, Ann Arbor
Care of the Premature Child
Louis Pasteur
Sound—2 reels—Joint Committee on Health Education, c/o Extension Division, University of Michigan, Ann Arbor

(Continued on Page 254)

For the infant deprived of mother's milk



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SIMILAR TO BREAST MILK

A powdered, modified milk product especially prepared for infant feeding, made from tuberculin tested cow's milk (casein modified) from which part of the butterfat is removed and to which has been added lactose, olive oil, coconut oil, corn oil, and cod liver oil concentrate.

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(Continued from Page 252)

That Mother Might Live
Sound—1 reel—Joint Committee on Health Education, c/o Extension Division, University of Michigan, Ann Arbor

They Live Again
Sound—1 reel—Joint Committee on Health Education, c/o Extension Division, University of Michigan, Ann Arbor

Tracking the Sleeping Death
Sound—1 reel—Joint Committee on Health Education, c/o Extension Division, University of Michigan, Ann Arbor

Circulatory Control
Silent—Joint Committee on Health Education, c/o Extension Division, University of Michigan, Ann Arbor

The Feet
Silent—Joint Committee on Health Education, c/o Extension Division, University of Michigan, Ann Arbor

Heart Disease
Sound (March of Time)—Joint Committee on Health Education, c/o Extension Division, University of Michigan, Ann Arbor

Heredity
Sound—Joint Committee on Health Education, c/o Extension Division, University of Michigan, Ann Arbor

Life of the Healthy Child
Silent—Joint Committee on Health Education, c/o Extension Division, University of Michigan, Ann Arbor

Milk and Health
Sound (March of Time)—Joint Committee on Health Education, c/o Extension Division, University of Michigan, Ann Arbor

Moving X-Rays
Sound—Joint Committee on Health Education, c/o Extension Division, University of Michigan, Ann Arbor

The Alimentary Tract
Sound—Joint Committee on Health Education, c/o Extension Division, University of Michigan, Ann Arbor

The Blood
Silent—¾ reel—Joint Committee on Health Education, c/o Extension Division, University of Michigan, Ann Arbor

Cancer, Its Cure and Prevention
Sound (March of Time)—Joint Committee on Health Education, c/o Extension Division, University of Michigan, Ann Arbor

Health Heroes Series
Owner: Metropolitan Life Ins. Co., New York
Madame Curie and the Story of Radium
Edward Jenner and the Story of Smallpox Vaccination
Robert Koch
Florence Nightingale
Louis Pasteur
Walter Reed
Edward Livingston Trudeau

Artificial Pneumothorax in the Treatment of Tuberculosis
16 mm. sound. A demonstration and discussion of uses of pneumothorax in all its phases—X-ray, post-mortem specimens, and animated diagrams are used to illustrate the picture.—Owner: Tuberculosis Association, 403 Seymour Avenue, Lansing, Michigan

Internal Wiring of Jaw Fractures
With Note on External Bar Fixation. Drs. James Barrette Brown and Frank McDowell, Washington Univ. School of Medicine—Davis & Geck, Inc., Brooklyn, New York (Color)

Cancer of the Female Breast
Diagnosis and Treatment. Dr. Frank E. Adair, Memorial Hospital, New York—Davis & Geck, Inc., Brooklyn, New York (Color)

War Wounds
Skin Grafting of War Wounds and Observation of Healing. Dr. John M. Converse, American Hospital in Britain—Davis & Geck, Inc., Brooklyn, New York (Color)

Hernioplasty
For Direct Inguinal Hernia. Dr. Lawrence S. Fallis, Detroit—Davis & Geck, Inc., Brooklyn, New York (Color)

Surgery of the Common Bile Duct
Dr. Chas. B. Puestow, Univ. of Illinois School of Medicine—Davis & Geck, Inc., Brooklyn, New York (Color)

Intrathoracic Goiter
The Lahey Clinic, Boston—Davis & Geck, Inc., Brooklyn, New York (Color)

Splenectomy
For Banti's Disease. Drs. Roy D. McClure and Lawrence S. Fallis, Detroit—Davis & Geck, Inc., Brooklyn, New York (Color)

Obstructive Resection
With Complementary Cecostomy. Dr. Fred W. Rankin, Lexington, Kentucky—Davis & Geck, Inc., Brooklyn, New York (Color)

Modified Mikulicz Operation
Right colectomy for carcinoma of the cecum. Dr. Richard B. Cattell, Boston—Davis & Geck, Inc., Brooklyn, New York (Color)

Surgical Treatment of Varicose Veins
With High Ligation and Individualized Stripping and Excision. Dr. Henry N. Harkins, Detroit—Davis & Geck, Inc., Brooklyn, New York (Color)

Purposeful Splinting
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Manchester Operation
(Donald-Fothergill operation) for Uterine Prolapse. Dr. Louis E. Phaneuf, Boston—Davis & Geck, Inc., Brooklyn, New York (Color)

Abdominal Complete Hysterectomy
For Fibroids. Dr. Arthur H. Curtis, Northwestern University Medical School. 3 reels showing a 2-stage thoracoplasty done by Dr. Overholt—Davis & Geck, Inc., Brooklyn, New York (Color)

"Lumbar Sympathetic Ganglionectomy"
Leriche approach.
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"Scaleniotomy for cervical rib—Adson-Coffey operation"
Dr. Alton Ochsner—Tulane University School of Medicine. One reel, 16 minutes. Per booking, $1.00. C-221—Davis and Geck, Inc., Brooklyn, N. Y. (Color)

"Cataract Extraction through vertical conjunctival slit"
Dr. Walter Moehle, Brooklyn. One reel, 12 minutes. Per booking, $.75. C-213—Davis and Geck, Inc., Brooklyn, N. Y. (Color)

"Correction of Nasal Deformities"
Dr. J. Barrett Brown—Washington University School of Medicine. One reel, 15 minutes. Per booking $1.00. C-175—Davis and Geck, Inc., Brooklyn, N. Y. (Color)

"Thyroglossal Cyst"
The Lahey Clinic, Boston. One reel, 10 minutes. Per booking, $.75. C-219—Davis and Geck, Inc., Brooklyn, N. Y. (Color)

Adrenal Cortical Insufficiency and Its Treatment
So—16—C—1—Owner: The Upjohn Company, 301 Henrietta Street, Kalamazoo, Michigan

White Battalions—Serving All Mankind
Owner: American College of Surgeons, 40 E. Erie Street, Chicago, Illinois

Thoracoplasty
1 reel (color)—The Medical Field Guild, 114 East 57th Street, New York, New York (Rental)

The Schede Operation
1 reel (color)—The Medical Field Guild, 114 East 57th Street, New York, New York (Rental)

Bronchopulmonary Lesions
1 reel—The Medical Field Guild, 114 East 57th Street, New York, New York (Rental)

The Early Development of the Rabbit Egg in Vitro
S—16—400′—Owner: The Wistar Institute of Anatomy and Biology, Woodland Avenue and Thirty-Sixth Street, Philadelphia, Pennsylvania
Rental for one day—$4.00

Tumor Cells and Macrophages in Tissue Cultures. Rat Sarcomas and Carcinomas
S—16—360′—Owner: The Wistar Institute of Anatomy and Biology, Woodland Avenue and Thirty-Sixth Street, Philadelphia, Pennsylvania
Rental for one day—$3.50

The Early Development of the Rabbit Egg
S—16—80′—Owner: The Wistar Institute of Anatomy and Biology, Woodland Avenue and Thirty-Sixth Street, Philadelphia, Pennsylvania
Rental for one day—$1.50

Early Divisions, 2-8 Cells, of Living Monkey Egg in Vitro
S—16—80′—Owner: The Wistar Institute of Anatomy and Biology, Woodland Avenue and Thirty-Sixth Street, Philadelphia, Pennsylvania
Rental for one day—$1.50

Dividing Cancer Cells in Vitro
S—16—160′—Owner: The Wistar Institute of Anatomy and Biology, Woodland Avenue and Thirty-Sixth Street, Philadelphia, Pennsylvania
Rental for one day—$2.00

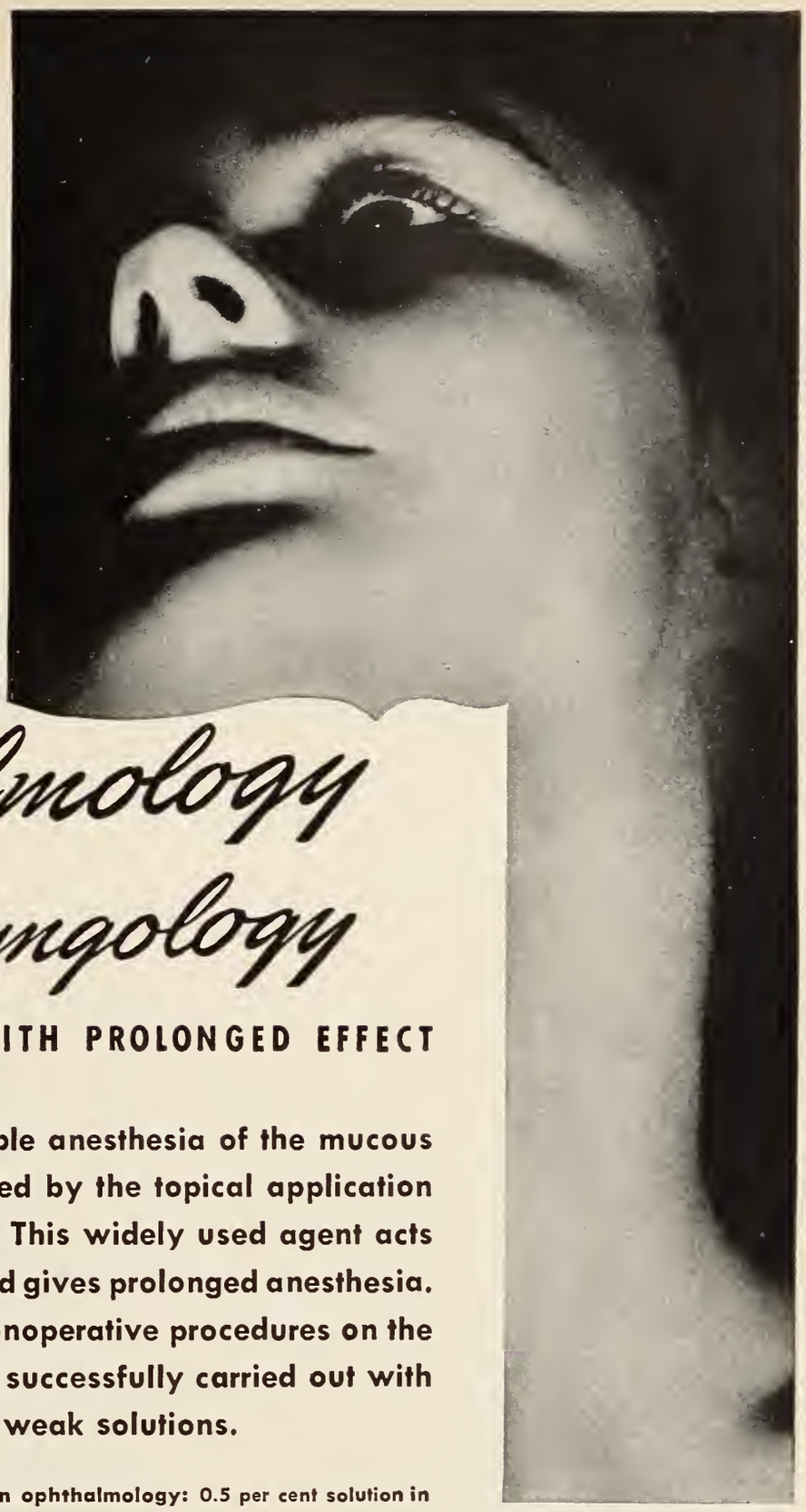
Growth of Capillaries and Endothelium from the Subcutaneous Tissue of 7-Day Chick Embryos in 2-Day Cultures in Locke-Bouillon-Dextrose-Medium
S—16—140′—Owner: The Wistar Institute of Anatomy and Biology, Woodland Avenue and Thirty-Sixth Street, Philadelphia, Pennsylvania
Rental for one day—$2.00

Pinocytosis. Drinking by Cells
S—16—264′—Owner: The Wistar Institute of Anatomy and Biology, Woodland Avenue and Thirty-Sixth Street, Philadelphia, Pennsylvania
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(Continued on Page 256)



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PONTOCAINE HYDROCHLORIDE IN *Ophthalmology* AND IN *Rhinolaryngology*

SURFACE ANESTHETIC WITH PROLONGED EFFECT

Dependable anesthesia of the mucous membranes is readily obtained by the topical application of Pontocaine Hydrochloride. This widely used agent acts quickly, penetrates deeply, and gives prolonged anesthesia. A variety of operative and nonoperative procedures on the eye, nose and throat may be successfully carried out with small quantities of relatively weak solutions.

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(Continued from Page 254)

Dividing Normal Adult Rat Fibroblasts in Vitro
S—16—160′—Owner: The Wistar Institute of Anatomy and Biology, Woodland Avenue and Thirty-Sixth Street, Philadelphia, Pennsylvania
Rental for one day—$2.00

Normal and Abnormal White Blood Cells in Tissue Cultures
S—16—400′—Owner: The Wistar Institute of Anatomy and Biology, Woodland Avenue and Thirty-Sixth Street, Philadelphia, Pennsylvania
Rental for one day—$4.00

Cervicitis
So—16—C—RT:23—Attendant supplied with movie—Owner: A. C. Barnes Co.

Health Is a Victory, Story of Gonorrhea
So—35 and 16—RT: 10-12—Owner: American Social Hygiene Association, 1790 Broadway, New York
Rental per day—$5.00

In Defense of the Nation
So—35 and 16—RT: 10-12—Owner: American Social Hygiene Association, 1790 Broadway, New York
Rental per day—$5.00

Modern Diagnosis and Treatment of Syphilis
S—35 and 16—2—Owner: American Social Hygiene Association, 1790 Broadway, New York
Rental per day—$2.00

Gonorrhea in the Male
S—35 and 16—3—Owner: American Social Hygiene Association, 1790 Broadway, New York
Rental price per day—$3.00

Darkfield Diagnosis of Syphilis
S—16—1—Owner: American Social Hygiene Association, 1790 Broadway, New York
Rental per day—$1.00

Bacterial Endocarditis and Valvular Disease
S—35—Owner: American Heart Association, 1790 Broadway, New York
Rental fee is $1.00, plus transportation

Diagnostic Tests in Peripheral Arterial Disease
S—16—C—Owner: American Heart Association, 1790 Broadway, New York
Rental fee $4.00 per day

Fluroscopic Diagnosis of Cardiac Infarction
C—16—Owner: American Heart Association, 1790 Broadway, New York
Rental fee $2.00 per day

Valves of the Heart in Action
S—16—216′—Owner: American Heart Association, 1790 Broadway, New York
Rental $1.00 per week
S—35—540′—Owner: American Heart Association, 1790 Broadway, New York
Rental $1.00 per week

The Heart and Circulation
S—So—16—Owner: American Heart Association, 1790 Broadway, New York
Rental $3.00

The Human Heart
So—16—1—Owner: American Heart Association, 1790 Broadway, New York
Rental $3.00

The Heart Beat Mechanism in Health and Disease
S—16—One reel to eleven reels—Owner: American Heart Association, 1790 Broadway, New York
Rental $2.50 to $17.50

Edema, Cardiac and Renal
S—16 and 35—4—RT: 35—Owner: Winthrop Chemical Co., 170 Varick St., New York

Diagnosis of Urologic Conditions
S—16 and 35—4—RT: 45—Owner: Winthrop Chemical Co., 170 Varick St., New York

Novocain Anesthesia in Obstetrics
S—16 and 35—4—RT: 45—Owner: Winthrop Chemical Co., 170 Varick St., New York

Regional Anesthesia
S—16 and 35—4—RT: 35—Owner: Winthrop Chemical Co., 170 Varick St., New York

Malaria
S—16 and 35—4—RT: 35—Owner: Winthrop Chemical Co., 170 Varick St., New York

Human Sterility
S—16 and 35—3—RT: 30—Owner: Winthrop Chemical Co., 170 Varick St., New York

Acute Appendicitis
S—16—2—Owner: Eastman Kodak Co., Rochester, New York
Rental $6.00
S—35—2—Eastman Kodak Co., Rochester, New York
Rental $10.00

Amyotonia Congenita
S—16—½—Owner: Eastman Kodak Co., Rochester, New York
Rental $1.50

Cardiac Irregularities
S—16—2—Owner: Eastman Kodak Co., Rochester, New York
Rental $6.00
S—35—2—Eastman Kodak Co., Rochester, New York
Rental $10.00

Cataract Extraction
S—16—1—Owner: Eastman Kodak Co., Rochester, New York
Rental $3.00

Development of Fertilized Rabbit's Ovum
S—16—1—Owner: Eastman Kodak Co., Rochester, New York
Rental $3.00
S—35—1—Eastman Kodak Co., Rochester, New York
Rental $5.00

Diagnosis and Treatment of Infections of the Hand
S—16—3—Owner: Eastman Kodak Co., Rochester, New York
Rental $9.00
S—35—3—Eastman Kodak Co., Rochester, New York
Rental $15.00

Ectopic Heart
S—16—¾—Owner: Eastman Kodak Co., Rochester, New York
Rental $2.25
S—35—¾—Eastman Kodak Co., Rochester, New York
Rental $3.75

Gold Ball Implantation
S—16—¾—Owner: Eastman Kodak Co., Rochester, New York
Rental $2.25

Indirect Inguinal Hernia
Surgical Anatomy (Reel 1)
S—16—1—Owner: Eastman Kodak Co., Rochester, New York
Rental $3.00
S—35—1—Eastman Kodak Co., Rochester, New York
Rental $5.00
Clinical Aspects of Hernia (Reel 2)
S—16—¾—Owner: Eastman Kodak Co., Rochester, New York
Rental $2.25
S—35—¾—Eastman Kodak Co., Rochester, New York
Rental $3.75
Operative Repair of Hernia (Reel 3)
S—16—¾—Owner: Eastman Kodak Co., Rochester, New York
Rental $2.25
S—35—¾—Eastman Kodak Co., Rochester, New York
Rental $3.75
Reels 1, 2 and 3 complete
S—16—3—Eastman Kodak Co., Rochester, New York
Rental $7.00
S—35—3—Eastman Kodak Co., Rochester, New York
Rental $12.00

Intestinal Peristalsis
S—16—1—Owner: Eastman Kodak Co., Rochester, New York
Rental $3.00

Prostatic Hypertrophy
S—16—1—Owner: Eastman Kodak Co., Rochester, New York
Rental $3.00
S—35—1—Eastman Kodak Co., Rochester, New York
Rental $5.00

Rabies
S—16—½—Owner: Eastman Kodak Co., Rochester, New York
Rental $1.50
S—35—½—Eastman Kodak Co., Rochester, New York
Rental $2.50

Simple Goiter
S—16—1—Owner: Eastman Kodak Co., Rochester, New York
Rental $3.00
S—35—1—Eastman Kodak Co., Rochester, New York
Rental $5.00

Suprapubic Cystotomy
S—16—¾—Owner: Eastman Kodak Co., Rochester, New York
Rental $2.25

Technique of Blood Transfusion
S—16—2—Owner: Eastman Kodak Co., Rochester, New York
Rental $6.00
S—35—2—Eastman Kodak Co., Rochester, New York
Rental $10.00

Tests of Vestibular Function
S—16—1—Owner: Eastman Kodak Co., Rochester, New York
Rental $3.00
S—35—1—Eastman Kodak Co., Rochester, New York
Rental $5.00

Todd-Parker Tucking Operation
S—16—½—Owner: Eastman Kodak Co., Rochester, New York
Rental $1.50

Treatment of Normal Breech Presentation
Adrian, Michigan.
S—16—2—Owner: Eastman Kodak Co., Rochester, New York
Rental $6.00
S—35—2—Eastman Kodak Co., Rochester, New York
Rental $10.00

Choose to Live
So—35—1—RT; 15—Owner: The American Society for the Control of Cancer, Inc., 350 Madison Avenue, New York
On Loan: $1.00 plus shipping costs

(Continued on Page 258)

Bismuth

IMPORTANT IN THE SUCCESSFUL TREATMENT OF *Syphilis*

Cheplin's

BISMUTHYL SODIUM TARTRATE

(For Intramuscular Use)

1½% solution

In 2cc. Ampules, 12, 25 and 100 per box. Also in 30cc. and 60cc. Vials.

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Recommended for cases requiring a higher bismuth content.

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Especially effective where arsenic is not well tolerated or is otherwise contra-indicated. Particularly recommended in cases resistant or intolerant to arsphenamines and mercury. In many cases a reversal of Wassermann or Kahn tests may be accomplished by the use of Bismuthyl Sodium Tartrate alone. Of value especially where rapid distribution and saturation with bismuth is considered desirable.

Cheplin's Bismuthyl Sodium Tartrate for intramuscular use has certain definite advantages in the administration of bismuth therapy. Briefly these are: (1) *High metallic bismuth content;* (2) *Water soluble* and compatible with tissue fluids. Absorbed with a minimum of leucocytic infiltration and local irritation. Injection is quite free from pain; (3) Prompt absorption; (4) Rapid therapeutic results. Usually spirochetes disappear rapidly from early lesions and both primary and secondary manifestations clear up promptly.

Dosage: 2cc. administered bi-weekly for 6 to 10 weeks. Literature and samples on request.

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(Continued from Page 256)

Choose to Live
So—35—2—RT: 30—Owner: The American Society for the Control of Cancer, Inc., 350 Madison Avenue, New York
On Loan: $2.00 plus shipping costs

Choose to Live
So—16—2—RT: 18—Owner: The American Society for the Control of Cancer, Inc., 350 Madison Avenue, New York
On Loan: $1.00 plus shipping costs

Enemy X
So—35—1—RT: 10—Owner: The American Society for the Control of Cancer, Inc., 350 Madison Avenue, New York
On Loan: $1.00 plus shipping costs

Enemy X
So—16—Owner: The American Society for the Control of Cancer, Inc., 350 Madison Avenue, New York
On Loan: $1.00 plus shipping costs

Conquering Cancer
So—16—1—RT: 7—Owner: The American Society for the Control of Cancer, Inc., 350 Madison Avenue, New York

Living Cells
S—16—2—RT: 20—Owner: The American Society for the Control of Cancer, Inc., 350 Madison Avenue, New York
On Loan: $2.00 plus shipping costs

Living Cells
S—16—3—RT: 30—Owner: The American Society for the Control of Cancer, Inc., 350 Madison Avenue, New York
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Living Cells
S—35—2—RT: 30—Owner: The American Society for the Control of Cancer, Inc., 350 Madison Avenue, New York
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S—16—1—RT: 10—Owner: The American Society for the Control of Cancer, Inc., 350 Madison Avenue, New York
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S-16-Kodachrome—375′. Owner: Peripheral Vascular Clinic, New York Postgraduate Hospital, New York City.

"Anesthesia with VINETHENE in Short Surgical Procedures and for Induction Prior to Ethyl-Ether"
S-16-Kodachrome-2-350′-250′. Owner: Abington Memorial Hospital, Pfeiffer Surgical Clinic, Abington, Pa. Dr. Ralph W. Maio, Director of Anesthesia

SOCIAL INSURANCE

1. *What is compulsory social insurance?*

A plan operated by the government which, through compulsory taxes on wages and payrolls, seeks to distribute the expense of old age, unemployment, sickness and accident disability, medical and hospital care, death, and related human hazards.

2. *How is a government scheme of compulsory social insurance financed?*

Usually by joint taxes on the employe and the employer plus contributions by the government. The employer passes along his tax to the consumer. The government passes its share to the taxpayer. In the final analysis, the taxpayer, who also is the consumer and the employe, pays the entire cost of government compulsory social insurance.

3. *What would a comprehensive government compulsory social insurance scheme cost American wage earners?*

At least 20 per cent of their wages, assuming minimum benefits for the coverages listed in Question 1.

—*Insurance Economics Society of America.*

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Poisoning in Infants Due to Common Cough Syrups*

By James L. Wilson, M.D.
Detroit, Michigan

James L. Wilson, M.D.
A.B., Colby College, 1920. M.D., Harvard Medical School, 1926. Medical Director, Children's Hospital of Michigan. Professor of Pediatrics, Wayne University College of Medicine. Member: American Pediatric Society, Society for Pediatric Research, American Academy of Pediatrics, Michigan State Medical Society.

The admission to the Children's Hospital of Michigan within twenty-four hours of three babies poisoned by morphine, one of them fatally, from medications given according to their physicians' directions, prompts this brief paper. Most instances in infants of serious narcosis other than those due to ordinary accidental poisoning can be attributed not to idiosyncrasy on the patient's part but to the inexperience or carelessness of physicians who prescribe preparations containing morphine or other opium derivatives without first calculating the proper dose according to the baby's weight.

Case Reports

Case 1.—This was a fifteen-months-old boy weighing 19 pounds. After two days of apparent respiratory infection and cough with some difficulty in breathing, the child was seen by his physician, who prescribed some sulfonamides plus a teaspoonful of a proprietary reddish cough medicine to be given every three hours. After the second dose the baby became drowsy, could not be aroused and didn't recognize his parents. The parents noted and spontaneously reported that the pupils became quite small although usually the baby's eyes looked very big. The child continued limp and impossible to arouse during the day of admission. On admission the baby had a temperature of 103, was comatose and had small pupils. Breathing was irregular and shallow over the lungs. X-ray confirmed the diagnosis of pneumonia. The baby was given oxygen and sulfathiazole and improved after the first day. The medicine given was reported by the druggist to contain ¼ grain of morphine to an ounce.

Case 2.—This was a seven-weeks-old infant weighing 10 lbs. The baby seemed well until five days before admission to the hospital, when he developed a cough which, after two days, became so bad that a doctor was called. An orange-colored medicine was prescribed which helped his cough, but the parents noted that the baby became very sleepy. Medicine was given according to directions every four hours day and night. Two days before admission the baby started to vomit. The day before admission he was noted to be very sleepy indeed and to become pale and of a bluish color. The baby was finally brought to the hospital on the doctor's orders. The baby on admission was breathing very irregularly. The pupils were small and did not react to light. There were fine crackling rales throughout both chests. He was breathing shallowly with long period of apnea. It was determined that the baby was getting the following prescription: Ethyl morphine gr. ¼, K-guaiacol sulfonate gr. 8, K-citrate gr. 20, and citrate acid gr. 6 made up to an ounce. The baby had been given one-half teaspoonful of this preparation twelve times. X-ray showed bronchopneumonia in baby. Oxygen and carbon dioxide was administered. The temperature became normal in one or two days and he recovered satisfactorily.

Case 3.—This was a three-weeks-old female weighing 7.5 pounds. Four days before admission to the hospital, this infant developed a slight cough which persisted until twelve hours before admission, when her physician prescribed a cough mixture which was red and smelled like cherries. One teaspoonful of this was to be given the baby every four hours. After the first dose the baby slept through the night and did not wake up for her feeding. It was noted by the parents that the baby did not breathe regularly. The mother was unable to arouse the baby for the 6 a. m. feeding and the milk ran out of the side of her mouth when the nipple was inserted and attempt made to feed her. However, the mother managed to give the baby another

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dose of the medicine by "forcing it down." The baby slept all morning and was noted to be slightly blue. At 2 p. m. attacks of blueness seemed to become worse and the baby "stopped breathing for four minutes." Her arms and legs became stiff and the parents thought the baby was having convulsions. The baby was seen by a physician who gave her an injection of alpha-lobeline about every three minutes for several times. On admission to the hospital the heart sounds were not audible and only occasional respiratory gasps were observed. After being given adrenalin in the heart and intravenous glucose, respirations became more regular but continued gasping. Caffeine, oxygen and carbon dioxide were administered. Several convulsions of slight severity were noted. The baby died a few hours after admission. It was found that the baby had been given a cough medicine which contained ¼ grain of morphine per ounce as well as several other non-narcotic ingredients. The formula reported by the druggist is as follows:

Ephedrine hydrochloride	gr. ½
Pot. guaiacol sulfonate	gr. 8
Ammonium chloride	gr. 8
Chloroform	m 1
Antimony pot. tartrate	
Morphine sulphate	gr. ¼
Syrup of cherry	1 oz.

Considering these cases which we have presented, it will be noted that in Case 1 the medication contained ¼ of a grain of morphine per ounce or a 32nd of a grain per teaspoonful. This may seem a very small dose. However, the baby's weight was 19 pounds, and, since this is approximately one-eighth of the weight of an average adult, the equivalent dosage in an adult would be 8 times 1/32 or ¼ grain. The baby therefore received an equivalent of ¼ grain of morphine in two doses at a three-hour interval and the reaction to morphine which occurred cannot be considered unusual. In this case the baby was not considered at any time in danger of death, but there can be no doubt that the dosage was dangerous and that the physician was ill-advised to prescribe it, particularly a second dose so soon without personally observing the baby's reaction to the first.

In Case 2 the baby was given one-half a teaspoonful of a preparation which contained 1/32 grain of ethyl morphine in a teaspoonful or he received 1/64 of a grain per dose. This again seems very small. However, the baby weighed only 10 pounds or, roughly, one-fifteenth of an average adult, which would make the dosage actually administered equivalent to about ¼ of a grain for an adult. That this repeated every four hours for 12 doses produced the result that it did is not surprising. The baby's condition was considerably more dangerous than that in Case 1. It probably would have been worse if the baby had not reacted by vomiting, although we are not at all sure how much of the medication was lost in this manner.

In Case 3 the baby weighed 7.5 pounds or approximately one-twentieth of an average adult weight. The medication given contained 1/32 of a grain of morphine per teaspoonful, so that the baby received the equivalent of approximately ⅔ of a grain of morphine to an adult and received a second dose while he was obviously greatly depressed by the first one. The fatal outcome is not surprising.

These three cases are, unfortunately, not unusual except that they happened to be admitted to the hospital during one day. Similar poisonings with codeine occur. Overdosage in small children by salicylates and other common drugs are by no means unknown.

Dosage of Narcotics in Infants

There is surely no need in these cases to surmise any idiosyncrasies to opiates or to explain the bad reactions as illustrations that infants are particularly susceptible to the influence of morphine. Idiosyncrasies or hypersensitivity to morphine occurs in infants and children as they do in adults. Traditionally such hypersensitivity has been considered more frequent in infants. No figures as to that are obtainable, however, and in the author's experience such sensitivity is extraordinarily rare. Morphine may be as valuable in infancy as in any other period, though the indications are probably not as frequent. The general contra-indications, such as cerebral depression or respiratory obstruction, are the same in infancy as at other ages, but otherwise there is no reason why morphine should not be given to an infant where sufficient pain or distress indicates it. One need worry even less about the effects of morphine in infants and young children since the danger of addiction to a habit is slight. However, morphine as any other drug is dangerous in infants when the dose is too large. The safest way to calculate dosage in infants for most medications, and certainly for the opium series, is on the basis of weight and a simple rule is to multiply the dosage one would consider reasonable for an adult by the fraction representing the portion of the baby's actual weight to

that of a 150-pound adult. A simple problem in arithmetic thus makes a proper dosage clear.

$$\text{Baby's dose} = \text{adult dose} \times \frac{\text{baby's weight}}{150}$$

The initial dose of morphine in infants and children should not be more than the equivalent of 1/8 of a grain to an adult. Later, after proper observation for evidence of sensitivity, larger doses may be given as need indicates. Young's Rule, that is, the age of a child divided by the age plus 12 multiplied by the adult dosage is a convenient formula and a safe one for older children, but it is not applicable to infancy.

$$\text{Child's dose} = \text{adult dose} \times \frac{\text{age}}{\text{age} + 12}$$

No system of dosage according to months of age is as safe as a dosage calculated from actual weight. An approximate weight is almost always obtainable even if the problem of actually weighing the child is impractical at the time of medication.

Conclusions

The use for infants of cough syrups containing opiate derivatives, whether morphine, codeine or others, without exact knowledge of the concentration of these drugs and careful calculation of the dosage according to the weight of the patient is inexcusable. Common cough syrups containing opiates in concentrations negligible in their effects on adults are highly potent and dangerous for infants.

MSMS

HIGH COST OF WARTIME ILLNESS

Approximately 15,000 bombers and forty-eight battleships could have been built with the days of labor lost through industrial sickness in the past year, Dr. Cassius Watson, medical director of the American Telephone & Telegraph Company, declared at a meeting at the Hotel Bossert, Brooklyn. His audience included sixty-four graduate medical students from six States, at the opening of an industrial medicine course given by Long Island University.—*New York Sun*, November 3, 1942.

Tertiary Syphilis of Skin and Bone

Co-Existing with Granulomatous Halogen Skin Eruption*

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and
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The patient was a tall and strongly built woman who had received irregular antisyphilitic treatment for several years. Recently, she had developed granulomatous and partly fungating skin lesions which progressed in spite of bismuth injections. She also had subacute osteomyelitis and periostitis of the tibia.

Antisyphilitic treatment was discontinued and the patient put on a high salt diet. Within a few weeks, some skin lesions disappeared, others lost their fungating character, then remained stationary. The bone lesion flared up. Thereupon, vigorous antiluetic therapy was instituted and caused quick resolution of the remaining pathology.

The authors call attention to three important rules.

1. Not every skin affection in a syphilitic is of spirochetal origin.
2. A history of recent antisyphilitic treatment does not preclude the presence of active syphilitic lesions.
3. Standard antisyphilitic therapy must be adjusted to the size of the patient.

THE following case appears worth while reporting because the concomitant presence of two granulomatous lesions presented a diagnostic puzzle. Both cutaneous syphilides and halogen granulomata of the skin co-existed despite the treatment for the former.

O. B., a colored woman, thirty years of age, sought treatment at the North End Clinic for skin lesions of six months' duration on the face and arms, and for a painful swelling of the left ankle. She gave a history of having received antisyphilitic treatment at irregular intervals for several years, and regularly for the last preceding year. During this time she had developed new skin lesions while the old ones did not heal.

A physical examination which was done on November 22, 1938, revealed a tall woman of strong build, height five feet 10 inches, weight 200 pounds. Her subcutaneous fat was well developed, but not excessive. A general physical examination revealed nothing of

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importance, particularly no evidence of syphilis of the central nervous system or other internal organs. There was an ill-defined firm swelling of the right leg just above the ankle, the skin was slightly reddened, and there was deep tenderness to palpation. Skin lesions were present on the face, both arms and sacral region. There was a roughly circular fungating lesion of about 3 cm. diameter involving the right side of the nose and part of the upper lip. A thin purulent exudate could be expressed from between the rather soft warty granulations. A similar lesion of 3 cm. diameter was present on the flexor surface of the right forearm. The left forearm showed an annular lesion of 1.5 cm. diameter with firm nodular border on three sides and superficial scar formation in the center and on the remaining side. There was a handsized area of irregular scarring with nodular infiltration of the periphery in the sacral region.

Laboratory examination revealed the following: The urine was normal. The Kahn reactions on the blood were positive. Old Tuberculin test (1:1000 dilution intradermally) was highly positive. Examination for tubercle bacilli was negative in direct smears of pus, and by culture from an excised piece of the lesion on the right forearm (Detroit Board of Health).

The microscopic examination of a biopsy from the right forearm showed pigmented skin containing normal histology in one-third of the length of the section. The remaining two-thirds were taken up by a dense granulomatous infiltration that occupied the whole thickness of the skin from the surface down to the sweat glands. The infiltration was very vascular and consisted mainly of histiocytes and small round cells. Accumulations of polymorphonuclear leukocytes formed small abscesses in the upper half of the cutis, while nests of plasma cells in dense arrangement formed a ring in the deep peripheral parts. A few eosinophilic cells were present. There were no giant cells. The most striking feature was the tremendous irregular proliferation of the epidermis, which sent strings and nests of epithelial cells deep down into the cutis. Mitoses were frequent, and the epithelial structures often engulfed remnants of elastic fibers where these had not been entirely destroyed by the inflammatory process. The surface was covered by a thick crust of epithelial and leukocytic debris with several abscesses opening through the epidermis. The cutis in the neighborhood of this granulomatous mass showed more or less dense lymphocytic collars around the blood vessels, particularly the small arteries (*See* microphotographs).

From the biopsy a diagnosis of chronic granulomatous inflammation was made. The findings were not characteristic of tuberculosis. Yet the marked atypical proliferation of the epidermis in the absence of giant cells and demonstrable micro-organisms favored a diagnosis of drug eruption due to iodides or bromides. However, the presence of large numbers of plasma cells and the arteritis in the border of the lesion suggested a syphilitic component.

Roentgen ray examination of the lower extremities indicated the left leg to be normal. However, there were changes in the lower end of the right tibia about 8 cm. from the ankle joint consisting of increased density and small circular areas of rarefaction. There was a complete change in the architecture of this area with thickening of the bone and periosteum. The appearance was that of a chronic osteomyelitis.

This patient, who gave a long history of syphilis, had skin lesions some of which looked like typical tertiary syphilides of the tuberoserpiginous type. In addition, there was clinical and roentgenologic evidence of a chronic osteomyelitis of the right tibia, and the orthopedic consultant was of the opinion that this was most likely of syphilitic origin.

Other skin lesions resembled more closely those fungating granulomata which are seen most commonly after the prolonged use of bromides, but which occasionally result from iodides. Biopsy of one lesion tended to confirm the impression of halogen eruption. On the other hand, one of these lesions was situated at one of the sites of predilection for superficial tertiary syphilides, the nasolabial region.

Matters were complicated by the fact that the patient, according to her story, had received routine antisyphilitic treatment at a public clinic for one year and that during this time the presumably syphilitic lesions had not subsided, but had progressed and new lesions had developed. This occurred in spite of the fact that the cutaneous lesions present were of a type which usually responds rapidly to even small doses of any antisyphilitic drug.

Three diagnostic possibilities were considered in this case: Therapy-resistant syphilis with atypical luetic lesions. Halogen eruption, probably due to the intake of potassium iodide. And, a combination of tertiary syphilides and iodide granulomata. A therapeutic test appeared to offer the best opportunity for a solution to the puzzle, and it was deemed advisable to rule out the drug factor first. The patient was advised to discontinue all oral medication and to substitute plain table salt for the iodized salt of her diet.

Starting on December 6, 1938, 30 grains (2 gms.) of sodium chloride, in tablet form, were administered daily for one week, following which the dose was raised to 150 grains (10 gms.) daily. The skin lesions appeared less succulent by the end of the first week. Thereupon all antisyphilitic treatment was discontinued. After one month of the higher dose of salt, the biopsied lesion on the right forearm had disappeared completely leaving a smooth scar. Most of the other lesions had flattened out considerably.

On February 3, 1939, after three more weeks of the same regime, the patient complained of greatly increased pain in her right leg, which was more swollen. The entire lower half of the tibia was very tender on pressure. Roentgen ray examination at this time showed definite changes in the architecture of the lower half of the tibia. There was some eburnation present and the outline of the tibia was irregular. This appearance was again diagnosed as chronic osteomyelitis.

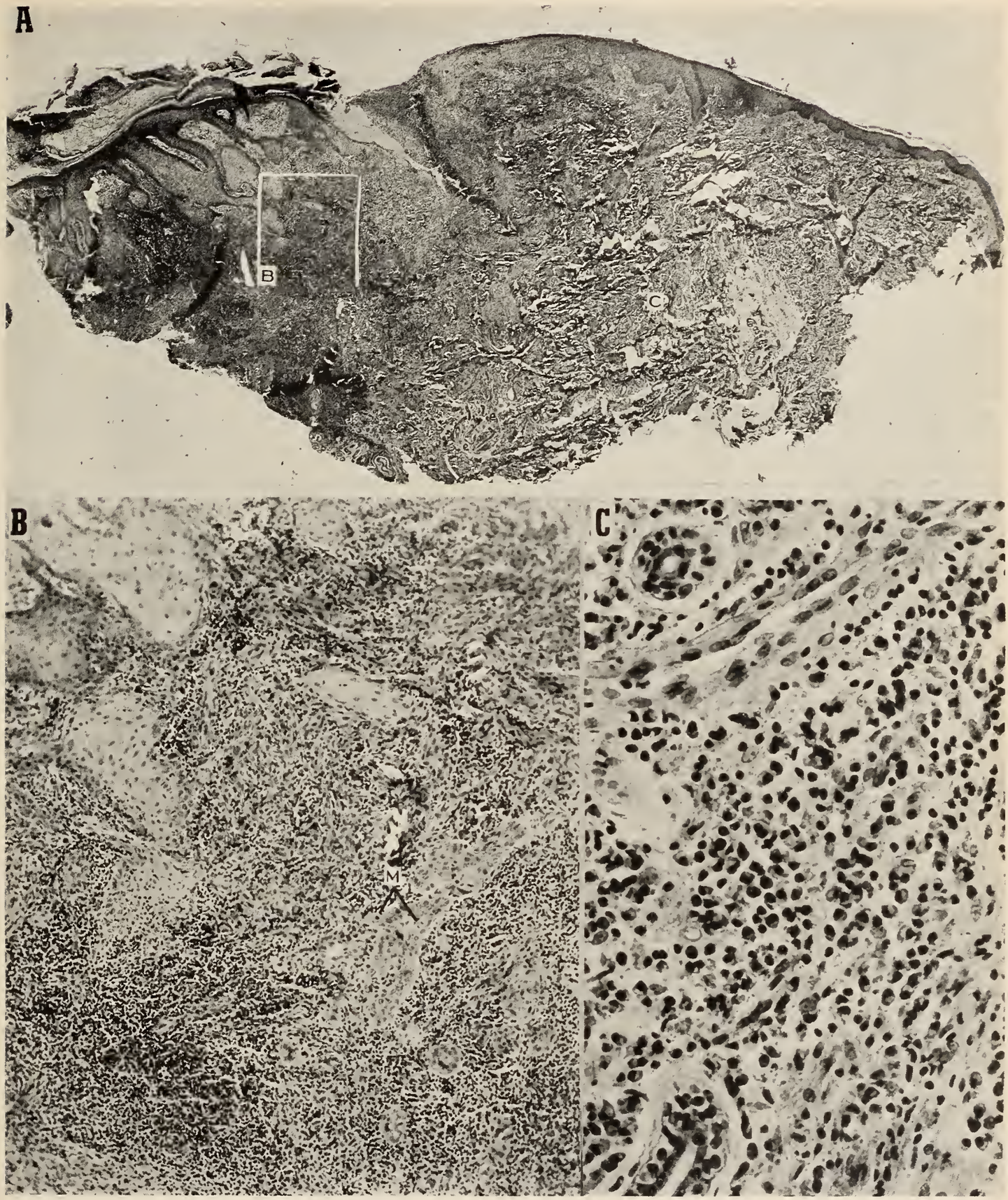


Fig. 1. *A*. Low power view of a section from a fungating lesion of the right forearm. Hematoxylin-Eosin. x 16. Normal skin at right. Dense granulomatous infiltration, ulceration, and increasingly atypical epithelial proliferation toward the left. The two squares indicate the fields of *B* and *C*.

B. Medium power view of part of the section shown in *A* x 100. Very dense, mixed cellular infiltration, numerous capillary blood vessels, and "pseudocarcinomatous" epidermal proliferation typical of halogen granulamos. "M" indicates two mitotic figures in one of the epithelial islands.

C. High power view of the field from the periphery of the lesion shown in *A* x 350. Numerous plasma cells with eccentric dark nuclei in the infiltration surrounding a sweat coil. Note the endothelial proliferation of the small artery. This field has the histologic characteristics of a syphilitic granuloma.

At the same time there had been no appreciable improvement of the skin lesions for several weeks. The lesion on the nose was now firm, much flatter than before and dry, but the surface still was hyperkeratotic and there was definite nodular infiltration. The kidney shaped lesion of the left forearm was even larger in diameter than when first seen.

It was now concluded that the patient indeed had had tertiary syphilides and drug granulomata simultaneously and even in the same locations; that the drug component by now had been eliminated; and the syphilitic process was advancing. Sodium chloride was then discontinued, and the patient was put on intensive antisyphilitic treatment with both bismuth subsalicylate intramuscularly and neo-arsphenamine intravenously.

By March 14, 1939, that is, after six weeks of antisyphilitic treatment all skin lesions had disappeared completely except for scars. The swelling of the leg had largely subsided and there was no pain. Combined, and later alternating treatment with bismuth subsalicylate and neo-arsphenamine was continued until March, 1940. Spinal puncture on April 19, 1940, gave essentially normal findings except for a positive Pandy reaction. A Kahn test on the blood serum was doubtful-positive at that time.

Through the courtesy of the Detroit Board of Health, the Hamtramck Board of Health and the Detroit Receiving Hospital we were able to trace this patient's history more closely. This investigation modified some of our first impressions without making the case less interesting.

The patient had had repeated negative Kahn tests at the Detroit Board of Health between 1931 and 1934. She had florid secondary syphilis (Condylomata lata) and a positive Kahn test in January, 1935. She was treated with neo-arsphenamine and mercury salicylate until May, 1935, when the Kahn test on the blood was negative. Treatment was continued with mapharsen and bismuth subsalicylate and she had negative Kahn tests in January and April, 1936. This patient did not continue regular treatment, however, and was found to have a serologic relapse in June, 1936. The Kahn test was again positive in August, 1936.

She received five thiobismol injections between September and December, 1936, and fifty-five more at irregular intervals between May, 1937, and December, 1938. A Kahn test on the blood November 22, 1937 was positive. On April 7, 1938, she was admitted to Receiving Hospital complaining of pain over the right tibia of six weeks' duration. A Roentgen ray diagnosis of early osteomyelitis was made. When the process progressed slowly and the Kahn test on the blood was still positive, a final diagnosis of syphilitic periostitis of the right tibia was made.

Comment

Two well-known but often overlooked facts were emphasized by the case history. First, not every granulomatous skin lesion in a syphilitic is of spirochetal origin; and, second, even a treated syphilitic may have active luetic manifestations. The extraordinary feature of the case is the development of syphilitic and medicamentous granulomata at the same time and even in the same location.

The diagnosis of a halogen eruption is strongly suggested, in our opinion, by the clinical and histologic features and by the rapid improvement following discontinuance of all possible sources of iodides and bromides and the administration of sodium chloride. It was presupposed that the patient had received potassium iodide but this was not borne out by our subsequent investigations. The patient had taken some patent medicine, but a sample of this did not give positive reactions for either of the halogens. No evidence of iodine in the urine could be found on examination December 6, 1938. The bismuth preparation which had been administered to the patient did not contain iodine.

Iodized salt then remains as the only likely source of iodine ingestion providing the patient did not hold back any pertinent information. This possibility must be kept in mind as the history given by her proved very unreliable on careful check up.

The diagnosis of tertiary syphilides is also well supported by the clinical features; the location at sites of predilection (nasolabial and sacral regions); the combination with syphilitic osteomyelitis, and the prompt response to persistent antisyphilitic therapy.

The duration of the patient's infection (negative serology up to 1934, secondary lesions in January, 1935) is fairly short for the development of tertiary manifestations. Syphilitic osteomyelitis, however, is well known as a feature of the tertiary stage of the disease. The early development of the skin lesions seen in this patient may indicate a personal predisposition for granulomatous reaction and may help explain the peculiar clinical picture.

The combination of syphilis and halogen eruption in one lesion, as it was present apparently in this patient, on the nose and in other locations, is indeed unusual. It would have been even more unusual if it could have been proved definitely that the iodides, ordinarily so effective an antisyphilitic drug, were the causative factors. No similar case was located in the literature. Some helpful considerations, however, are these:

Iodine eruptions are not uncommon side effects in antisyphilitic therapy. Both halogen eruptions

and particularly tertiary syphilis have a known tendency to localize at sites of previous trauma, be it mechanical or chemical. Cinnabar-tattooed areas of the skin are usually spared in syphilitic exanthemata because of their mercury content. However, there are two cases on record in which they were preferred sites of syphilitic lesions.[1,2] Finally, it has been shown that administration of potassium iodide, even to normal subjects, caused the skin to form tuberculoid reactions to luetin (extract of syphilitic tissues rich in spirochetes).[3,4]

A last point which merits discussion is the question of "therapy resistance." There is no doubt in view of our later findings that the term would be misapplied in this case. The patient, due to her own negligence, had received objectively insufficient treatment. However, one is not always in a position to verify a patient's statement that he has received antisyphilitic therapy regularly for one year during which time new lesions developed. It is important to bear in mind in such cases that the therapy may have been inadequate either because the patient was negligent or because the physician following accepted routine gave too small doses. While fortunately, many syphilitic skin lesions respond to surprisingly small doses, there are other lesions which need considerably more than the recommended "routine." In particular, large patients, as in our case, where the patient was taller and heavier than many men may require computation of dosage which is adequate for their weight.

Summary

The presumptive diagnosis of the combination of tertiary syphilis and drug eruption in a patient who had received antisyphilitic therapy was verified by therapeutic tests for lues and iododerma. The case is presented for a discussion of the pathogenetic possibilities and as an appeal for exercising great care before arriving at diagnostic and therapeutic conclusions in seemingly confusing cases of syphilis.

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Management of Skull Fractures*

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Craniocerebral injuries in the United States occur to the extent of more than half a million victims a year. Approximately 65 per cent of the deaths resulting from skull fractures occur in the first twenty-four hours following the injury. The widespread distribution and the early occurrence of death will always make this a problem for the general physician and surgeon. The author collected and analyzed 3,300 cases of consecutive proved skull fractures from 1929 through 1934. The mortality rate varied from 25 per cent to 49 per cent during that period. The last ten years has brought forth abundant teaching of better management. Has it reduced the mortality rate? Is there room for still further improvement? These and other questions are answered in the author's second nationwide survey of 3,200 consecutive proved skull fractures.

■ The intracranial pathologic condition and not the fracture in the skull guides the management. Comparing 100 cases of head injury with skull fractures with 100 cases without fractures the mortality rate in the former is approximately 10 per cent greater. Therefore, in collecting the statistics, proved skull fractures were used to secure cases of comparable seriousness.

Prior to ten years ago great controversy waged among leading authorities concerning various procedures of management in acute craniocerebral injuries. In recent years there is more unanimity of opinion especially concerning adequate dehydration and the use of spinal drainage when indicated by the signs and symptoms. The author has made a hobby of this subject for the last fifteen years and has talked and given exhibits on skull fractures in all parts of the country. In addition to his several published articles, literature has been fortunate to have excellent articles concerning the management of craniocerebral injuries by many other authorities. Has all of this

*Read before the Seventy-sixth Annual meeting of the Michigan State Medical Society at Grand Rapids, September 19, 1941.

COMPARISON OF GOOD AND POOR MANAGEMENT.

Management Used	Good Group Per Cent Used	Poor Group Per Cent Used
1. Careful observation and charting the course	85%	32%
2. Do nothing but rest only (Author's Group I—6%)	8%	18%
3. Hit-or-miss type of treatment Methods used inadequate	4%	66%
4. Dehydration used—50% glucose (82%) 50% sucrose (18% of all cases) (Author's Group II—50%)	36%	50%
5. Spinal puncture (Author's Group III—35%)	50%	18%
6. Spinal drainage done early (first twenty-four hours) and adequate amount drained (20 c.c. to 60 c.c.)	78%	24%
7. Operations done (Author's Group IV—9%)	5.5%	11%
8. Good operative judgment used as to why to operate and when	75%	40%
9. Shock rules observed: Don't x-ray at once Don't operate early Don't reduce associated fractures or operate other associated injuries in presence of cerebral shock Don't add insult to injury	90%	50%
10. Oxygen and blood transfusion	10%	1%
11. Mortality rates (Author's in 400 cases—16.8%)	17–21%	29–42%

educational work resulted in the lowering of mortality rate in head injuries?

From 1929 to 1935 the author studied consecutive proved skull fracture records collected from over 100 surgeons and from eighteen different hospitals in all parts of the country. He has exhibited the methods of management used in these cases and the resulting mortality rates on several occasions. In order to answer this question of whether educational propaganda has reduced the mortality rate he made a second survey of consecutive proved skull fractures covering the five-year period from 1935 to 1940.

The accompanying table shows the gross results in these two surveys.

Comparing the types of management in the four hospitals (373 consecutive cases) where good observation and good treatment was used with the eleven hospitals (750 consecutive cases) where poor observation and treatment was the rule, one finds the answer to the question—How can the high mortality rate in skull fractures be reduced?

In between the good management hospitals and the poor management hospitals there were five hospitals representing 2,206 cases where average treatment prevailed. The mortality rates in these hospitals varied from 22 to 28 per cent.

The accompanying table sets forth the major types of management which will raise or lower the mortality rate in skull fractures. Furthermore it shows in what percentage of cases the various types of management are used in the good group hospitals as compared with the poor group hospitals. Herein we have answer to the above question.

MSMS

Relationship of Anesthesiology to Medical Practice*

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The centennial of a major specialty in medicine is marked by a brief consideration of the dynamic development of Anesthesiology since Long's use of ether on March 30, 1842. Emphasis is laid on the discoveries through research, teaching, and clinical application. Its present integration with such associated fields as physics and chemistry, physiology and pharmacology, as seen in the laboratory, medical school, hospital and office, is discussed. A concept of the scientific knowledge, as well as to safer and more efficient clinical application in the practice of medicine, is presented.

■ THE centennial of an event in a special field of scientific endeavor is an appropriate time to review the relationship from origin, through development and indicated trend, of the special

*Read before the Seventy-seventh Annual Meeting of the Michigan State Medical Society at Grand Rapids, Michigan, September 24, 1942.

part—Anesthesiology, to the whole Medical Practice.

This year marks the centennial of the use of ether by the medical profession. In 1842, on March 30, Crawford Williamson Long, a physician of Jefferson, Georgia, administered ether to James Venable. During the sleep produced by inhaling this ether, Long enucleated one of two tumors from the nape of Venable's neck. Packard goes on to say, "The procedure was completely successful, Venable assuring Long that he experienced no pain whatever, and sometime afterwards Long operated again under ether on the other tumor."

Long is said to have thought animal magnetism (mesmerism) aided by ether inhalation was responsible for his earliest success. Evidence was produced that Long on many other occasions used ether to prevent pain in surgical procedures. Fülöp Miller credits Long by saying:

"Well, the experimenter had found the objective evidence of which he was in search, and could now be sure that ether and nothing but ether was the cause of the insensibility. He might have gone on to do more operations under ether, proud of his new method, which would have made of him the pioneer of an overwhelming important discovery, the introducer of anesthesia, of which even the name did not yet exist. He had made trustworthy observations, and had drawn the right conclusions from them. His original Supposition was shown to be correct. All that he lacked was the confidence of faith."

Chronologically,† pain relief was first obtained in an unexplained manner. Adam "slept" while a rib was removed and the flesh closed. This could have been by inhalation or by hypnotism according to various translations, as some say, "The Lord caused a wind to blow on Adam" while the currently accepted form is "And the Lord caused a deep sleep to fall on Adam."

Clay tablets found in Nippur dating about 2250 B.C. gave a remedy for tooth pain. One thousand years later Æsculapius used a potion, termed nepenthe, to produce insensibility in surgical patients. In 450 B.C., Hippocrates used the vapor of bangue by inhalation for narcosis and various mixtures and methods were tried in an unceasing search for an ideal anesthetic.

Credit for the earliest forms of anesthesia must be given in various fields of human endeavor, to physicians, dentists, priests, chemists, physicists, engineers, physiologists, pharmacologists, and to others whose observations, experiments or concepts entered and altered the development of this field in medical practice.

Lullius in Spain about 1240 had discovered "sweet vitriol." The chemists, scientists and physicians knew of the drug for three centuries before Paracelcus in Switzerland, experimenting on fowls, discovered and reported its soporific effect. He suggested its possible use in painful diseases. In 1541, Valerius Cordus, in Germany, recorded the synthesis of sweet vitriol named "ether" in 1792 by the German, Frobenius.

Could it be that the best educated group of scientists, the physicians, should fail to see the possibilities of Cordus' remarks about ether or of Davy's report that nitrous oxide might afford the long-sought pain relief? Three hundred years passed, filled with needless suffering because a well-intentioned but unobservant group—doctors—failed to make a trial or application of possible deductions from evident facts long known to chemists.

Medical practice is respected for its wisdom in making thorough trial over long periods before accepting new drugs or new principles. Surely etherization was a long time being accepted. After the first hundred years this new, improved tool in the physician's armamentarium developed from a humble beginning to a recognized major specialty.

The purpose of this presentation is not to revive an interesting argument on who was "first." It is to show the relationship of Anesthesiology to Medical Practice. The pre-centennial period was one of individual discovery by accident or experiment. Ether was made by a chemist, used in various ways by physicians, some of whom noted partial but interesting facts which in light of modern knowledge showed the way to anesthesia, but these sign posts were ignored.

From the very beginning of time, pain has haunted human beings. The presence of pain had hindered the progress of medicine. Remedial measures to restore an ailing body could not be undertaken because of pain. Death itself was welcome as a relief from pain and any measure regardless of danger was to be accepted if pain could be abolished, or obtunded.

The relationship of Long's, Well's, Morton's and Simpson's anesthesia for relieving surgical

†Lundy, J. S.: Clinical Anesthesia. pp. 705-717. Philadelphia: W. B. Saunders Company.

pain or obstetrical pain is to the present scope of anesthesiology as the acorn is to the oak. These physicians applied, experimentally, the drugs and methods suggested by chemist, apothecary, or by the engineer, as Watts, whose gas inhalers were used by Davy at Beddoes Pneumatic Institute. The era of trial and error was at hand. Just as an occasional figure stands out in every field of human endeavor, so does John Snow, a physician of London, who used methods of laboratory research as well as clinical observations on ether, published in 1847, and ether, chloroform and other anesthetics, published in 1858, which deservedly have given him the title "First Scientific Anesthetist."

Inhalation of ether for pain relief was quickly established. Pirigoff of Russia in 1847 reported on the rectal administration of ether. A new method was provided. In 1853, the hypodermic needle devised by Pravaz of France provided another mode for producing pain relief. It was named "anesthesia" in 1846 by Oliver Wendell Holmes, and allied with it was analgesia. Anesthesia is the loss of the sensation of feeling or touch. Consciousness is the differentiating factor between the terms, as analgesia is most frequently employed to refer to anesthesia without loss of consciousness.

Pain relief for surgery was extended to obstetrics. As this valuable adjunct made surgery safer and more comfortable it opened new fields within surgery. Dental pain relief was included. Rapidly the more time consuming, delicate, and intricate procedures were made possible through the application of anesthesia.

Anesthesia grew as additional drugs were found, and as methods of introducing them were devised. As part of the development of anesthesiology, the logical evolution was the responsibility of the administrator acquainted with gases, vapors, drugs, equipment, and with cardio-respiratory mechanisms involved in anesthesia to use his knowledge and skill to overcome apparent cessation of cardiac or respiratory function, and resuscitation immediately became a major factor in the list of functions of a qualified anesthesiologist. As inhalation anesthesia is a form of therapy so the field of pneumatology or gas-therapy is integrated.

The surgical specialties developed in the establishment of abdominal, gynecological, orthopedic, genito-urinary, plastic, neuro, brain, and chest surgery, and others, each using anesthesia as a means of advancing its own specialty through comfort for the patient and efficiency for the operator.

Surgical pain relief expanded to include treatment of intractable pain—to diagnose obscure diseases. From a simple inhalation technique progress was made to oral and nasal insufflation and later endotracheal and endobronchial intubation. Analgesia became possible as skill developed in the operation of adequate equipment. These phases of progress demanded additional knowledge of basic sciences.

One hundred years ago, the novice was capable of holding a handkerchief, towel or mask and giving ether, chloroform and later nitrous oxide gas. As the methods and drugs increased in number, the need for more than a technical "sixth sense" was evident. Additional drugs became the "what" as Flagg has recently written, and the method became the "how." When only ether by inhalation was available, what difference did it make what disease the patient had? With rectal and intravenous administration of anesthetizing drugs a greater need for more knowledge of pharmacology and physiology, of anatomy and pathology, was evident. True, a technician may still adequately give whatever anesthetic was ordered, but with the more complicated procedures made possible by good anesthesia, more of the operator's attention was essential to his own work. It is little wonder then, that the occasional student of anesthesia knew as much or more than the "supervisor." Modern hospital practice with separate dressing, scrubup, anesthesia, and operating rooms, makes "supervision" possible only by remote control.

Placing a needle in the spinal canal or for regional blocks when introduced, was considered part of the surgeon's duties. Now this work is included in the duties of the anesthesiologist.

Oxygen therapy developed to include many gases or vapors and became allied with surgical and obstetrical fields, and with the medical practice of the internist, allergist, and others. Hypnotism or mesmerism in the early part of the past century was used to provide anesthesia and is still being investigated. Shock treatments by carbon dioxide or nitrogen therapy for schizophrenia brought the anesthesiologist's service in close association with the psychiatrist.

Resuscitation, whether for overzealous intro-

duction of anesthetic drugs, for cardiac disease, pulmonary disturbance, or other causes, applies to all fields of medicine and surgery and in all age groups. In the course of treating shock, fluid therapy, including blood transfusion, has added another branch to the growing list of duties of an anesthesiologist.

From the foregoing remarks it should be evident that this field of medical endeavor has gone beyond the stage of technical aid to surgery. It is an extensive field for mastery by one individual, and it is still growing.

Medical practice may be described as the combination of a thorough knowledge of basic science in general, specific facts in detail, with an ability for rapid and logical deduction and an art in proper application of the conclusions derived "to diagnose, treat, operate on or prescribe for any human ailment."* All this is certainly required of the anesthesiologist of today. How can this be obtained? The early era of hit and miss trial and error is surely past. The era of mechanical obedience to routine, imitation of accepted practices, the mere relief of pain or production of tissue relaxation led to an era when surgeon and anesthetist realized that surgery had run away from its helpmate, anesthesia.

As the field has expanded it has outgrown the first era of single agent, single method technical task, to one which challenges the ingenuity and resourcefulness of its followers. This challenge has been accepted by increasing numbers of physicians completing their medical school and hospital internship, who seek a career in either clinical practice, teaching or research in this specialty.

Little incentive to diligent study was offered in the second "era" because "convenience" and "economy" too often decided the personnel of the anesthesia staff, as Rovenstine has remarked. Technical skill was an asset all important. Teaching was negligible. Much routine was established, empirically, because it had been suggested by a prominent person or on the weight of professional opinion. The range of the Anesthetist's domain was limited by the four walls of the operating room, or possibly extended to the limits of the operating room suite. During this era, the lack of glamour, but probably even more, the lack of genuine supervision, retarded progress in anesthesia. The clinical administrator of anesthesia became aware that he often knew as much, and occasionally more, than the operator charged with that responsibility.

Technical anesthesia is important. It can be taught to many who have not had physician's training. Surely this form of service can and should be available in any emergency from every physician. How can this be done? The medical school curricula is already full. The answer is simple. Demand by the physician for such training will work wonders. Postgraduate training will be promptly forthcoming. This in turn should awaken interest in the problem of this training in medical school. A sufficient genuine demand will cause medical schools to arrange programs whereby anesthesiology will be given specific time in the undergraduate program.

The "third era" began about 1920 with a realization by some outstanding physicians that anesthesia should render greater service in medical practice. More scientific methods of recording results were established. A few centers began to teach not only the "what" and "how" but went into the "when" and "why," or advanced special study of physiology, pharmacology, anatomy, diagnosis and other pertinent and basic principles. This was the era of self-styled specialists.

Large hospitals and clinics discovered that genuine saving in material, patient days, and improved physical results could be obtained by establishing training in the specialty. The American Medical Association coöperated and set up standards for approved residencies or internships. Some medical schools established a full department of anesthesia. The American Society of Anesthetists established certification by examination, in 1935.

By 1937 news of the widespread interest, and the extent of this special phase of medical practice, stirred a sympathetic note with the Advisory Board for Medical Specialists and the Council on Medical Education and Hospitals of the American Medical Association. They approved an American Board of Anesthesiology as an Affiliate of the American Board of Surgery. Within two years the affiliation, though most cordial and valuable, was dissolved by vote of all six surgical specialties and approval of the medical specialties. The restrictions to a single group were deemed most unfair and in 1940 Anesthesiology was recognized as a separate major specialty in

*Medical Practice Act, State of New York.

medical practice. That same year final plans were accepted and in 1941—99 years after Long, the American physician, used ether for anesthesia—a Section on Anesthesiology was established in the American Medical Association. Sections are granted only when there is undeniable proof of a definite need, plus a sufficient number of qualified physicians to warrant its establishment, as a specialty.

It is interesting to see why it is a major specialty. It most surely began as an adjunct to surgery through its alleviation of pain. After a few years it was adapted to and adopted by obstetrics. Medicine progressed. Surgery made rapid strides through the favorable assistance of anesthesia. Surgery began to specialize—orthopedic, gynecologic, nose and throat—all assisted by anesthesia, but the implications of anesthesia were not realized. Here the forest was obscured by the trees. Ether, chloroform, and nitrous oxide by open or semi-closed methods allowed surgical advances undreamed of and the proper attitude with regard to the "ology" of anesthesia was not appreciated. Anyone could "assist" the surgeon at the operating table. Then came situations where the surgeon could not supervise except by remote control. Besides, the lack of inclusion in most medical curricula left doubt that the supervisor had much more knowledge of anesthesia, if as much, as did the chemist, nurse, student, or layman. Since the boon to humanity was so great and at first so simple, why bother about qualifications? The surgeon had assumed responsibility so long for everything that the addition of anesthesia was just one more burden. Eventually it was realized that sharing responsibility made for safer and often better work in each department. No surgeon likes to be hampered by a neophyte operating room assistant. A good operating room nurse is of acknowledged importance. Recently the value of an anesthesiologist has become apparent.

The "fourth or present era" thus provides a definite time when every physician should have the benefit of specific training in this field. How else can he be held morally responsible for the supervision of a part of medical practice he has never learned? The present war has produced a situation unique in our history. Never has there been such a shortage of physicians or nurses. Because for the past eighty years anesthesia was not considered important in this country, nurses and technicians have been employed as anesthetists for convenience or presumed economic necessity until more than 3500 registered nurses, many sorely needed by the armed forces, are now not available in their regular nursing capacity.

Most recently with the present war demands of our armed forces, the anesthesiologist has been recognized. He provides valuable research with advice and clinical applications in meeting problems presented by high altitude flight and deep-sea diving. The anesthesiologist aids in making earlier return of greater numbers of soldiers with chest injuries than was possible for the technician. In other countries all physicians have been trained in medical school or internship in the technical principles of this work.

You, present today, should be able to step into your local clinic or hospital and render this medical service "under supervision." After a few contacts with this work you can justifiably demand—where did you (the supervisor) get your training? You will generally find that it was like Topsy—"just growed." So you can encourage him or her to back your request for a real establishment of this subject in the medical school.

Of sixty-seven Grade A medical schools in the United States, only forty-one list anesthesia as a regular subject and only twenty-six seem from reports to be carrying out actual class-room instruction in 1941. Curricula for training are being made available by the American Society of Anesthetists Committee on Education and the American Board of Anesthesiology's Committee on Curricula. Here, then, is a definite plea to you and to all physicians to urge that medical schools include this subject in their curricula, for medical societies and academies to establish refresher courses and thus make American physicians independent in anesthesiology.

Rovenstine has well said in urging the establishment of adequate teaching facilities and the organization of Departments of Anesthesia in hospitals, that such a department shall be "merited not for its individual service, but for its usefulness in making more efficient other institutional departments. Its object is to assist them in their efforts for better surgery, better and more economical care of patients, shorter hospitalization, better diagnosis, better treatment, and a lower death rate."

Haggard has wisely advocated a greater advertisement of anesthesiology to the layman as well as to the profession. There is evident an increasing awareness on the part of laymen everywhere of a trend for better medical service in their behalf. The public press, radio, and medical exhibits open to the lay person have intensified this interest and have led to an increased demand for the anesthesiologist. Persons today who must undergo painful procedures request not only "something to ease the pain," the "what" and "how," but more important, "someone who knows the when and why." Medical organizations and schools listen to and follow the reasonable request of public opinion.

A society of physicians interested in anesthesiology organized in 1905, expanded from a minimal membership of 140, with an average attendance of eight at the annual meeting in 1926, to an active society, national in scope since 1935, with 1,069 paid-up members, and with an average attendance of 143 at each of the six meetings held during 1941. Advertising the specialty is legitimately accomplished through meetings with other groups in various parts of the country—by supplying the physicians with scientific research and clinical presentations of interest to all, and by publishing a first-class medical journal—*Anesthesiology*—which is limited in content to the specialty but available to all interested readers.

In the past half-decade the specialty has obtained much prestige from recognition as a special field in medical practice by the establishment of the American Board of Anesthesiology and Section on Anesthesiology. The demand for properly certified specialists who have a truly scientific approach to problems involved has been met. With the close of the last era a great broadening of the field requiring greater basic training was evident. Anesthesiology is a broad subject. It covers pain relief in all its forms—analgesia and anesthesia, pneumotherapy with its ramifications, and resuscitation. Anesthesiology is a part of the practice of medicine and should be practiced by physicians.

Summary

The origin of anesthesiology has been traced. Contributing factors to the establishment of a special field in basic sciences as chemistry, physics, mechanics, anatomy, physiology, pathology and pharmacology have been acknowledged. Development of a specialty in medical practice has been traced through definite eras of discovery, of experiment and empiric practices, of prescientific, technical development and statistical records to the present era of scientific application through definite teaching standards. The growth of the specialty from an adjunct of surgery through direct connection with almost every special field of medical or surgical practice has been shown. Sources of demand for recognition of a medical specialty have been credited. An appeal has been made for every American physician to share in the further development of teaching, research and clinical practice of anesthesiology.

The centennial of the administration of ether by Long marks the beginning of an era in a newly accepted and intimately related field of medical practice, designated "Anesthesiology."

MSMS

Cases of Early Syphilis*

Suggested Outlines for Ambulatory Intensive Treatment

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■ We have appreciated and even hoped that recent standards for the treatment of early syphilis might soon become obsolete. However, such standards have remained practically without change for the past fifteen years and could be simply stated as requiring continuous treatment, without rest periods, consisting of alternating courses of bismuth and arsenicals given at weekly intervals until a total of thirty to forty arsenicals and forty bismuth injections have been administered in a period of seventy to eighty weeks. Re-

*Prepared by the Chairman of the Syphilis Control Committee, Michigan State Medical Society.

cent developments are revolutionizing this concept of treatment. We are again in an unsettled state almost as indefinite as that following the introduction of salvarsan. We have a new means of attack but lack sufficient clinical experience and length of observation to standardize such methods. We, therefore, can no longer speak confidently about the most effective method for the treatment of early syphilis.

Intensive methods of treatment using rather heroic dosage of arsenoxide (mapharsen) given in a short period of time are now holding the limelight. Such intensive therapy is best exemplified in the five day drip method introduced by the Mt. Sinai Hospital (New York) group.[3] It consists of giving 240 mgs. of mapharsen in 2000-3000 c.c. of five per cent glucose, by slow intravenous drip, over an eight to twelve hour period daily for five days. A total dose of 1200 mgs. (twenty standard doses) of mapharsen is thus given in five days. Various modifications of intensive therapy using multiple injections by syringe technique are being tried. They also aim to administer a total dosage of 1200 mgs. by such methods, in variable periods of from six to twenty days. Multiple injections plus fever therapy are being used by Thomas,[5] and the most radical of all, a one-day method, has been reported by Simpson.[4] This method has been tried on only a small series of cases and was, unfortunately, recently reported in the lay press with unwarranted enthusiasm, by DeKruif.[1]

These intensive methods are producing results that, admitting the lack of sufficient length of observation, appear to be surprisingly satisfactory. The bugaboo in the management of early syphilis has been the inability to hold the great majority of such patients to a schedule of continuous treatment for seventy to eighty weeks. Intensive methods, even though they require hospitalization, will offer a great advance, at least from a public health standpoint, in the management of early syphilis.

A death rate, even under expert management, of approximately one in three hundred cases treated (0.3 per cent) usually from toxic encephalitis, emphasizes the potential hazard of such treatment. At the present time, therefore, such methods of treatment should be attempted only on hospitalized patients by well-trained physicians who have made at least an exhaustive study of the details of technique and management through available literature. Realizing that 80 per cent of early cases of syphilis in civil life fail to secure adequate treatment and are thereby rendered more liable to the serious manifestations of late syphilis, as well as a potential public health hazard, and the need in times of war of rendering infected personnel safe and available for active duty in both civilian and military life in the shortest period of time, makes this method of treatment justifiable with the above reservations in spite of an accepted mortality rate of 0.3 per cent. It has not been sufficiently emphasized in the lay press and even many physicians fail to appreciate that such therapy is recommended only for active cases of primary (chancre) and secondary syphilis that have not been previously treated. Selection of even these cases should be made on a basis of age and physical condition.

Modified Intensive Methods Suitable for Office and Clinic Practice

We have learned through experience with intensive therapy that more frequent injections and a higher total dosage of arsenoxide (not neoarsphenamine) can be given with reasonable safety in a shorter period of time. Our aim in the treatment of early syphilis has always been to cure the patient in the shortest period of time. On the basis of experimental therapy on 2500 rabbits, Eagle[2] concluded that the total curative dose of mapharsen is approximately constant whether administered in a few days or several weeks, and that the margin of safety between toxic and therapeutic dose is increased by prolonging the duration of treatment. Experience with intensive therapy would suggest that this curative dose is approximately 1200 mgs. of mapharsen. Eagle[2] has therefore suggested that an ambulatory intensive system be tried, giving three injections of mapharsen weekly for six to eight weeks in dosage of 40 to 80 mgs. per injection, depending on weight. Some cases will also receive supplementary bismuth therapy. A number of clinics are coöperating in carrying out this treatment regime. The results thus secured through a large number of cases should soon determine the efficiency of this method of treatment.

The Surgeon-General of the United States Army recently issued Circular Letter Number 74 which will probably become famous. It outlines a modified form of intensive treatment for cases of early (primary and secondary) and asympto-

matic or truly latent syphilis. To ascertain latency, all cases should have a complete physical and spinal fluid examination before treatment is begun, to determine eligibility by ruling out tertiary (particularly cardiovascular) and neurosyphilis. Cases of early syphilis should have a negative spinal fluid examination after the first mapharsen course or at least on completion of the treatment, before they are to be dismissed to observation only. This Army Plan, as outlined herein, has had as yet practically no clinical evaluation, and its effectiveness is still to be determined.

ARMY PLAN

(For Early and Latent Cases)

Mapharsen

Week	1)	
	2)	
	3)	Mapharsen
	4)	intravenously
	5)	.05 to .07 gm.
	6)	adjusted to
	7)	weight twice
	8)	weekly for ten weeks.
	9)	Total twenty injections
	10)	
	11)	
	12)	
	13)	Omit
	14)	Mapharsen
	15)	six weeks
	16)	
	17)	
	18)	
	19)	
	20)	Mapharsen
	21)	as in
	22)	first course
	23)	twice weekly
	24)	Total twenty injections
	25)	
	26)	

Bismuth

Week	1)	Bismuth Subsalicylate
	2)	0.2 gm. intramuscularly
	3)	once weekly, five doses
	4)	
	5)	
	11)	
	12)	Bismuth
	13)	as above
	14)	once weekly
	15)	six doses
	16)	
	22)	Bismuth
	23)	as above
	24)	once weekly for
	25)	five doses
	26)	

This plan calls for a total of 40 mapharsen and 16 bismuth injections in a period of 26 weeks. On the completion of treatment, early cases should be rechecked preferably at monthly intervals for the first year. Latent cases may be checked at three-month intervals during the first year. Thereafter, if serologically negative, both types should be rechecked at six-month intervals for a total of at least five years. The serology in positive cases, as also applies to the more intensive methods of treatment, usually does not reverse to negative until two to ten months after treatment has been completed. A quantitative test is desirable since it gives more information in following such treated cases. Early cases should have a complete physical with each follow-up examination or banal secondary recurrences may be overlooked. Consultation should be requested for cases that remain sero-positive for one year after treatment is completed and for early cases discovered to have a positive spinal fluid, that do not show satisfactory improvement on recheck of spinal fluid at the end of six months.

This Army Plan is frankly a compromise between the short intensive system now being tried out and the seventy-week standard treatment regime. It should not be used for late cases or in elderly patients or those that are poor risks from a physical standpoint. It should be safe, reasonably effective and shorten treatment time from seventy to twenty-six weeks. Experience would indicate, however, that it will still be difficult to hold a satisfactory percentage of clinic type patients to even a 26-week course without lapses.

In January, 1942, an ambulatory intensive method of treatment was begun at the Social Hygiene Clinic of the Detroit Department of Health. It has been used only for cases of primary or secondary syphilis that have either refused hospitalization for five-day therapy, or have been considered poor risks. It is somewhat more intensive than the Army Plan. It calls for thirty mapharsen and eight bismuth treatments over a period of fifteen and two-thirds weeks or approximately four months. It was hoped to hold patients more effectively to this schedule than with standard treatment. It has been satisfactorily tolerated to date but it is still too early to attempt an appraisal of our results. It is

offered as another modification of an ambulatory intensive method for office and clinic use.

DETROIT PLAN
(Early Cases Only)

1. Mapharsen (.05 to .07 gm. according to body weight) three times weekly for 20 doses (6⅔ weeks).
2. Bismuth subsalicylate 0.2 gm. twice weekly for eight doses (four weeks).
3. Mapharsen twice weekly for ten doses (five weeks). A spinal fluid examination should be made during the bismuth course or at least on the completion of treatment. Otherwise, follow-up is same as outlined in the Army Plan.

Our experience with this plan has been disappointing in that we still have a discouragingly high percentage of clinic patients who fail to complete this course of treatment according to schedule. It will therefore be necessary to shorten still further ambulatory intensive methods if they are to be effectively carried out. This makes the five-day hospital plan the most satisfactory. As stated, the limitations of five-day therapy would not permit its recommendation for general use. Further experience with six- to ten-week courses after the Eagle plan is indicated.

The Detroit ambulatory system as outlined has therefore been modified in an attempt to shorten still further the period of treatment. We are giving three mapharsen injections weekly for eight weeks along with eight weekly injections of bismuth salicylate. This totals twenty-four mapharsen and eight bismuth injections administered in eight weeks. Experience in Eagle's group would indicate that such intensification is not without hazard since they report one death in approximately 1,000 patients similarly treated. We do not believe, therefore, that such six- to eight-week courses should be recommended for general use at the present time. Until further experiences are accumulated proving both their safety and efficiency, we believe that either the Army or the Detroit Plan of modified intensive therapy may be recommended for general use in cases of early syphilis where physicians feel that patients will not prove coöperative in completing without lapses the standard 70-week course now in general use.

Conclusions

1. Intensive treatment of the five-day type is potentially hazardous. Its use should be limited to such cases as can be treated in special hospitals with adequately trained and experienced personnel.

2. Intensive treatment has been used primarily for cases of early syphilis (chancre or secondary) that have had no previous treatment. It is not recommended for late syphilis or serologically-fast cases.

3. Modified intensive methods for ambulatory patients suitable for office or clinic use are being tried out. There has not been sufficient experience as yet with such methods to recommend any one plan as standard treatment. The suggested plans of Eagle, the U. S. Army and the Detroit Department of Health are outlined.

4. The proven efficiency and safety of continuous treatment (seventy to eighty weeks) makes this method the procedure of choice for general use until the efficiency and safety of ambulatory intensive methods have been satisfactorily established. The use of such ambulatory intensive methods should be limited at the present time to such cases as the physician believes will not prove coöperative in completing without lapses standard continuous treatment.

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MSMS

A revolutionary change has taken place in the treatment of ophthalmia neonatorum with the advent of sulfonamide therapy. Previous to 1938 a gonorrheal ophthalmia meant many weeks of treatment. Frequent irrigations, ice compresses, atropine, silver nitrate and argyrol instillations, foreign protein canthotomies, etc., were part of the treatment. Many eyes were lost and others severely damaged. Early in 1938 Willis reported the use of sulfanilamide by mouth in the treatment of gonorrheal ophthalmia. Now with a like but less toxic drug, sulfathiazole, Neisserian conjunctivitis gets well virtually before our eyes. Negative conjunctival scrapings are nearly always obtained within seven days after the advent of the disease.—W. Howard Morrison, M.D., Omaha, in the *Nebraska State Medical Journal.*

Some Surgical Problems in Ulcer Treatment*

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Operation advised for ulcer only when reasonably certain that conservatism will not protect from bleeding, obstruction, or constantly recurring pain. Decision, though sometimes easy, usually made after study of all factors. Thorough preparation essential. Saving hospital days is dangerous. Dilated stomachs need decompression by prolonged constant suction, not intermittent emptying. High resection gives best results. Pyloroplasty has been discarded, gastroenterostomy reserved for aged and feeble with obstruction. Antecolic anastomosis the preferable method of reconstruction. Even though no open ulcer demonstrable resection should be done. Deliberate opening of duodenum often necessary to safely dissect sufficient cuff for secure inversion. Duodenal stump fistula highly fatal. Resection for exclusion, with removal of prepyloric mucosa, should be kept in mind. Experience will reduce need for its use. No sulfa drugs used intraperitoneally. Continuous spinal best anesthetic, if available. Immediate postoperative coöperation of patient in deep breathing and coughing prevent severe atelectasis, the most common complication. Minimal sedation. Bronchoscopic aspiration early or not at all. Constant nasal tube suction prevents nausea, vomiting and distention, permits clear fluids at once. Mortality rate greatly reduced.

■ The greatest single advance by surgeons in the treatment of ulcer occurred when they stopped operating on uncomplicated cases. As a result, surgery for ulcer today carries a heavier burden in that it must now attempt to cure only those patients which medical measures have not relieved, and all of these are difficult cases. Rapid advance has occurred in the last few years in the type of operation, the technique of its performance, and in pre-operative and postoperative care. There are still many points where disagreement persists, and problems yet awaiting complete solution. We propose to discuss a few of these, thinking primarily of duodenal ulcer.

Selection of Patients for Operation

What ulcer patients should be accepted for operation? Immediately we are faced with one of the hardest questions. It can and has been answered quite simply by saying those should receive the benefit of surgery which bleed repeatedly, those which obstruct, those which have proven intractible to good medical care and those in which malignancy is feared. However, the one which has bled repeatedly may be relatively young, and may not have received or followed a good regime. We must be reasonably satisfied that he cannot or will not be protected from recurrence by conservative measures. A definite knowledge of the degree of bleeding is important. A mouthful of blood will mean a hemorrhage to one patient, while a fainting attack followed by copious tarry stools will be just a little bleeding to another. It is recognized that as age increases so also does the danger that bleeding will prove fatal. One places the line at forty-five years after which age all cases should be operated upon. Another says it should be fifty years. But one person at fifty may have better arteries than his neighbor at forty.

The patient who is obstructed may show a hugely dilated stomach with no barium passing through the pylorus in twenty-four hours and seems to demand surgery. Yet this may be due entirely to edema. A few days of constant suction by means of a tube passed through the nose into the stomach will restore the latter to normal size and may allow the pylorus to regain its function. A satisfactory study of the pylorus and duodenum can then be made, and often followed by complete relief under good medical management. Constant suction is vastly superior to frequent lavage, both as to time and certainty of result.

Then there is the intractible case, most difficult of all to evaluate. Certainly operation should not be advised until medical treatment has failed. When shall we say it has failed? How satisfied can one be from the patient's history that treatment has been adequate? The surgeon must be convinced beyond reasonable doubt that only operation offers permanent relief. Therefore, the decision as to whether to operate or advise further medical treatment cannot be answered by putting the patient into his proper slot of hemorrhage, obstruction, or intractability. While the conclusion is easily reached in many cases, in most it is only after careful consideration of all the information obtainable that one may be satisfied with his judgment. The primary reason for operation in ninety-six cases is shown in Table I.

*Read before the Seventy-seventh Annual Meeting of the Michigan State Medical Society, at Grand Rapids, Michigan, September 25, 1942.

TABLE I. REASON FOR OPERATION IN NINETY-SIX RESECTIONS

Bleeding 18			Obstruction 23			Pain 46			Fear Ca. 9
Obst. 1	Perf. 4	Pain 8	Bldg. 10	Perf. 3	Pain 13	Bldg. 13	Perf. 11	Obst. 17	
13			26			41			

Bleeding present	41
Obstruction present	41
Pain present	67
Previous perforation	18

It also indicates the large proportion of serious secondary complaints. In Table II the incidence of these primary symptoms is shown by age groups.

TABLE II. REASON FOR OPERATION BY AGE GROUPS

Age	Bleeding	Obst.	Pain	Fear Ca.	Total	
25–30	4	1	8	1	14	
31–35	2	3	2	1	8	(56)
36–40	3	4	11	0	18	
41–45	3	4	8	1	16	
46–50	1	4	7	0	12	
51–55	4	4	4	2	14	(40)
56–60	1	1	2	2	6	
61–65	0	2	4	2	8	
	18	23	46	9	96	

When to Operate

When shall operation be performed? There is often the temptation to accede to the patient's insistence that it be done promptly as soon as he has agreed. If one is to keep a low mortality rate, the best preparation of the patient should be attained, and this often takes time. The man who has just suffered a severe hemorrhage, even though he has stopped bleeding and his blood picture is approaching normal, should be sent home for from two to four weeks. During this time he should be reasonably active, and taking a diet rich in proteins. His resistance to infection and his healing power will be much greater.

The patient with pyloric obstruction has a large dilated stomach with edematous walls. He should have several days of constant suction to reduce the dilatation and edema. This was used to prepare twenty-five patients in this series. An edematous wall is hard to work with because it is thick and the stitches pull out easily, increasing the danger of leakage or bleeding. The dilated stomach may cause the surgeon to make an anastomosis normally sufficient, but when the remaining stomach contracts it may be too small. We like to have these patients out of bed for several minutes twice a day during this preparatory period to prevent too much loss of general tone.

Determination of serum proteins and blood urea are routinely done. If the former level is below six, time is taken to raise it, either by food or small repeated plasma transfusions, or both. High blood urea can usually be lowered quickly by intravenous glucose in saline.

In general we may say that time spent in good preparation pays rich dividends in smooth convalescence, and a lowered mortality.

Choice of Operation

What type of operation shall be done? Most ulcer patients now coming to the surgeon have been so miserable for so long that they really mean it when they say they want to be well or dead. Experience has shown that gastro-enterostomy is by no means a curative operation in too many cases. In addition to those who continue to have distress unless they live very carefully, or in spite of it, there is that too large number who develop jejunal ulcer. The pain associated with this is usually more severe, more persistent, and less amenable to relief by conservative measures. In nine gastro-enterostomies for duodenal ulcer done during the last four years, in carefully selected cases, two have developed jejunal ulcers, another has bled, probably from his duodenum, and still another, while improved, is not well. We believe this operation should be reserved for the aged and feeble patient with obstruction.

Pylorplasty cannot be satisfactorily performed on the scarred and deformed tissue present, the diseased or ulcerated area is not removed, and the results have been so disappointing that it has almost been discarded.

It has taken us rather a long time to accept high resection of the stomach as the operation of choice in duodenal ulcer. However, most surgeons who have had much experience with this problem have adopted the major procedure together with its risk because of the excellent results. It eliminates hyperacidity, hypersecre-

tion, hypermotility and pylorospasm, which are so constantly present in the ulcer patient.

It was assumed that the mortality rate would continue to be a deterring factor, and therefore limit the indications for resection. With greater experience and familiarity with this operation the mortality rate now compares favorably with that following the lesser operations. When the complications of the latter which require the most major procedure for correction are considered, resection proves safest in the end.

Ulcer Not Found

When an open ulcer cannot be demonstrated at operation what should be done? This occasionally occurs in cases properly selected for surgery. We have been accustomed to think of these patients as having one ulcer all the time, always present, but not always active, or causing symptoms. This we now know to be untrue in many cases at least. The ulcer often does heal, but there is so much scar tissue in the duodenal wall that a new ulcer easily forms. With each repetition the deformity increases. Clinical proof that ulcers occur at different points in the duodenum at different times is found in those patients who have perforated an anterior ulcer at one time and bled from a posterior one at another. There are at least nine such cases in this series. Though no actual ulcer is found, the scars of previous trouble are the guarantee that the future holds more. Resection should proceed as planned and not be traded for a simple appendectomy.

Duodenal Stump

The problem of the duodenal stump. Leakage here is a very serious, usually fatal complication, and can only be prevented by getting a good cuff for inversion. The duodenum is always adherent to the pancreas, often the ulcer has perforated into it, making it difficult to dissect off enough to get a good closure. Deliberate opening of the duodenum near the pylorus and placing the finger inside as a guide has helped greatly in many cases. It has not been followed by infection. As a further protection the stump is turned into the head of the pancreas with a few silk sutures.

The Buried Duodenum

In some cases the duodenum is so thoroughly imbedded in dense fibrous tissue which makes one mass with the head of the pancreas that successfully dissecting it free seems impossible. Here Finsterer's resection for exclusion is a good operation to have at hand. The stomach is divided about two inches proximal to the pylorus and the distal stump inverted after the mucosa of this area has been removed. The resection is then carried out as usual. This excludes the diseased area from the food stream, and is preferable to the risk of cutting the common or pancreatic ducts, or the chance of duodenal stump leakage. It has given good results in our hands in seven patients. However, the greater the number of cases one does the more infrequently does one resort to this procedure.

Type of Anastomosis

What type of anastomosis should be used? It has appeared to us that uniting the stump of the stomach to the duodenum, as in Billroth's first method, has no place in the operation for duodenal ulcer. If a sufficiently high resection is done the stomach and duodenum can be brought together only after extensive mobilization, or held under tension which is to invite disaster. Nor should we place too much confidence in the diseased duodenal wall to hold or to heal.

We prefer the anterior anastomosis, bringing a long loop of jejunum in front of the transverse colon. This loop should not be so short as to cause tension or to carry the weight of the colon. Enterostomy between the afferent and efferent limbs is not only unnecessary, but tends to defeat one of the purposes of the operation, namely the alkalinization of the stomach and anastomotic area. This method has been used in sixty cases with complete satisfaction. A short jejunal mesentery occasionally makes the anterior union impractical, when the posterior route through the transverse mesocolon is used. Here it is of great importance that the mesocolon be securely anchored to the stomach above the stoma to prevent constriction of the jejunal loop.

Possibly at a time when the sulfa drugs are riding the crest of a popular wave we should not admit that none are sprinkled around the anastomosis or duodenal stump. No peritonitis has developed except early in our series when one suture line broke down and two duodenal stumps blew out. Chemotherapy is not a substitute for poor surgery, and would not have saved these cases.

TABLE III. ANESTHESIA AND PULMONARY COMPLICATIONS

		Atelectasis	Pneumonia	Rec.	Died
N_2O Ether	62	7	2	6	3
Pentothal and ether	3				
Intratracheal	10	7	1	5	3
Spinal	21				
Novocain—2					
Pontocain and local—1					
Nupercain—7		2	1	3	
Fractional—11		4	1	5	
	96	20	5	19	6

Anesthesia

Another problem is the choice of the anesthetic. Ether, after induction with one of the gases or pentothal sodium, is fairly satisfactory. We thought for awhile that when given through an intracheal tube it would be hard to improve upon. But such a high rate of major pulmonary complications followed that we discontinued it. Local and splanchnic has been used (only in carcinoma of the stomach) but this is tedious both for the surgeon and the patient. Dilute nupercaine intraspinally proves ideal in some cases. But if difficulties prolong the operation unduly its action may not last. Intermittent spinal, often called continuous or fractional spinal, with novocain, is our first choice at present. It can be well controlled, given in small amounts as needed, provides excellent relaxation, and seems to have a very high safety factor. The practical objection is that anesthetists competent to give it are not widely available. Table III presents a summary of anesthesia and pulmonary complications. While the occurrence rate is less when ether is used, the complications are more serious. The long period between the close of operation and the return of full consciousness together with an active cough reflex to a large extent explains this. Atelectases following any form of spinal have been less extensive and more quickly controlled. We believe it is due to elimination of this period of unconsciousness.

Postoperative Problems

Treatment at this time is almost as important as the operation itself. Vomiting and distention have been almost completely eliminated by the use of constant suction. Clear fluids are given as soon as the patient desires them. This washes out any blood clots and keeps the stomach clean as well as free from swallowed air and intestinal regurgitation. It prevents pressure on the diaphragm and the consequent embarrassment of free aeration of the lungs. When the record shows a positive balance, that is, more being taken by mouth than returned through the tube, it is removed. If there is doubt about this balance, the tube may be clamped, being opened only if the patient is distressed. A clean, moist tongue and audible normal peristalsis usually mean the tube is no longer necessary. It is rarely needed more than four days or less than two.

Occasionally, just when the patient is beginning to take a maintenance diet, vomiting occurs. In a surprisingly short time not even water is retained. The temptation to re-operate at this point should be vigorously resisted. An edema of the tissues about the anastomosis has probably occurred. A low serum protein will support this diagnosis. Small, repeated plasma or whole blood transfusions will improve this level. Nasal tube suction will again maintain comfort. If this obstruction persists for over two weeks a mechanical cause must be suspected and exploration may be decided upon. In one such case we found omentum wrapped around the stoma and both jejunal loops. Jejunostomy for feeding may well be done at this time. It is definitely indicated if only stomal edema is found.

Our most frequent and disturbing complication has been pulmonary atelectasis. This is nearly always evident within the first forty-eight hours. It has occurred after all types of anesthesia. The cause remains obscure, but insufficient regular aeration of the lungs must be an important factor. We have tried to eliminate some possible elements. Since these resections should be high the work close to the diaphragm is done as gently and with as little tension as possible to prevent diaphragmatic irritation. A carefully made paramedian incision is used, either right or left, retracting the rectus muscle outward. This is as carefully closed, using interrupted silk sutures. It seems to be the least uncomfortable incision, next to the transverse which we have not found satisfactory in most ulcer patients who have high, narrow costal arches. Transverse bands of adhesive for dressing have been eliminated. A

narrow strip of gauze is placed over the incision and held by two vertical strips of adhesive. Morphine is given as sparingly as possible, in doses of never more than 1/6 grain to preserve the cough reflex. We have also eliminated the use of atropine, believing that it favors plugging of the smaller bronchi by its tendency to produce thicker and more tenacious mucus. Nurses and house officers are instructed to support the incision and compel the patient to cough at frequent intervals during this danger period. He is also encouraged to move about in bed a great deal, turning from side to side with as little assistance as possible. As suggested above, the use of a spinal anesthetic makes early coöperation possible.

The treatment of this condition follows the same line as the attempt to prevent it. Patients can be made to cough up the offending plugs in nearly all cases. X-ray films of the chest are important because they so clearly show whether or not treatment is being effective. If the affected lung does not clear promptly, bronchoscopy should be done early. It is only harmful if done too late.

The material upon which these comments are based includes resections for sixty-two duodenal ulcers, twenty-two gastric, six jejunal, and six cases in which both duodenal and gastric ulcers were present. There were six deaths in the first twenty-seven, and three in the following sixty-nine. Partial solution of the problems mentioned has favored the reduction in mortality.

MSMS

PASTEURIZATION OF ALL DAIRY PRODUCTS ESSENTIAL IN CONTROL OF BRUCELLOSIS

Careful pasteurization of all dairy products is an essential safeguard against milk borne brucellosis (Malta or undulant fever), it is pointed out in *The Journal of the American Medical Association* for January 30 in a report on a milk borne epidemic of the disease in Marcus, Iowa. The report is presented by I. H. Borts, M.D., Iowa City; D. M. Harris, M.D., Le Mars, M. F. Joynt, M.D., Marcus; J. R. Jennings, B.A., and Carl F. Jordan, M.D., Des Moines.

From their findings the investigators also advise that hogs should not be permitted to run on the same lot with dairy cows and that prevention of the occurrence of brucellosis in human beings requires a continuing program and effective measure for the eradication of the disease among farm animals. The epidemic at Marcus, involving seventy-seven persons, was caused by a strain of the organism causing brucellosis which was traced to a raw milk supply. It was found that hogs had been allowed to mingle freely in the same pasture with the dairy cows.

Nephritis and Nephrosis*

By E. T. Bell, M.D.
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E. T. Bell, M.D.

Professor and Head of the Department of Pathology, University of Minnesota. He has interested himself over a long period of time in the pathology of diseases of the kidney, particularly glomerulonephritis and hypertension kidney. He has also written a number of papers in other fields of pathology and has been interested for many years in surgical pathology. He is co-author and editor of Bell's "Textbook of Pathology."

Nephritis is best classified on an anatomical basis as glomerular, tubular, interstitial and vascular. Glomerular diseases are of two types, viz., obstruction of the glomerular capillaries (proliferative), and hyperpermeability of the capillary wall (membranous glomerulonephritis). This latter type is called lipoid nephrosis. Proliferation of the capillary endothelium obstructs the blood flow through the glomeruli decreases the glomerular filtrate and causes uremia. In lipoid nephrosis the blood proteins leak into the urine, decreasing the plasma proteins and causing edema. Albuminuria and edema are evidences of glomerular not tubular disease. The conception of a nephritic or nephrotic "Einschlag" is incorrect.

■ Apart from congenital anomalies and hydronephrosis renal diseases may be classified on an anatomical basis as glomerulonephritis, tubular disease, vascular disease and interstitial nephritis. This anatomical classification corresponds entirely with clinical syndromes and makes it possible for the clinician and the pathologist to use the same terminology. This discussion will be restricted to the diseases of the glomeruli and the tubules.

Glomerular Diseases

Glomerular diseases are of two distinct types: (a) Proliferative glomerulonephritis in which the glomerular capillaries are obstructed by enlargement and proliferation of the lining endothelial cells, and (b) a disease of the capillary basement membranes which causes them to become permeable to the plasma proteins. This second type of glomerular disease is commonly called lipoid nephrosis.

Proliferative Glomerulonephritis

This form of glomerular disease is much more frequent than lipoid nephrosis except in children under ten years of age in which group nephrosis

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is the dominant type. It is also called azotemic glomerulonephritis because of the characteristic retention of nitrogen in the blood. With respect to duration we may distinguish acute, subacute and chronic forms although the groups are not sharply separable.

1. *Acute glomerulonephritis.*—This disease is nearly always preceded by or associated with an infectious process, usually a streptococcal infection. Among the common antecedent infections are sore throat or other acute upper respiratory infections, cellulitis and scarlet fever. Albuminuria is a constant feature, but there is no direct relation between the amount of albumin and the ultimate outcome. Recovery is not complete as long as there is any protein in the urine. The urinary protein is plasma protein which passes through the walls of the injured glomerular capillaries. There is nearly always an increased number of red cells in the urinary sediment and occasionally there is gross hematuria. Edema is commonly present but is seldom a serious complication; frequently there is no edema. The specific gravity of the urine is not markedly reduced except in severe cases which have developed uremia. The blood pressure is usually moderately elevated, the systolic pressure being increased 20 to 40 mm. Hg. In mild cases no hypertension may be observed.

In fatal cases the kidneys are markedly swollen and cloudy. On microscopic examination the tubules show no conspicuous changes, but the glomeruli are enlarged, avascular and cellular. Under high magnification it is found that the glomerular capillaries are almost completely obstructed by growth of the lining endothelial cells. The capillary obstruction causes a great reduction in capillary blood flow and a corresponding reduction in the amount of glomerular filtrate. Uremia develops because of obstruction of the glomerular filter.

In the cases that recover completely or become chronic the degree and extent of the capillary obstruction is presumably much less than in those who die of uremia in the acute stage.

About one-half of persons with acute glomerulonephritis recover completely, a small percentage die of uremia in the acute stage and a large percentage pass over into the subacute, latent chronic or active chronic stages.

2. *Subacute glomerulonephritis* is applied arbitrarily to cases that terminate in uremia from three months to one year after onset of the acute attack. There is albuminuria, edema, severe hypertension, and renal insufficiency. The kidneys are enlarged and pale. Microscopically there is severe obstruction of most of the glomerular capillaries by endothelial cells. The tubules show marked atrophy from disuse and ischemia. There is no primary injury of the tubules. Although the tubules are atrophic the kidneys are still large because there has been insufficient time for contraction to occur.

About one-fourth of patients with acute glomerulonephritis pass over into a latent chronic stage and remain apparently well for many months or years, but a careful study during this period will usually reveal some abnormality. After months or years of quiescence symptoms of the active chronic stage develop. The kidneys of the latent stage are available for study only in rare instances of death from intercurrent disease, since the renal lesion is very mild.

The kidneys of the latent stage appear normal macroscopically, but careful microscopic study reveals central hyaline masses in the glomerular lobules with a little narrowing of the glomerular capillaries. The progress from the latent to the active chronic stage is presumably due to repeated streptococcic infections with progressive obstruction of the capillary circulation.

3. *Chronic glomerulonephritis.*—In autopsy material this form of the disease is about four times as frequent as the acute type. The patient usually consults his physician in an advanced stage of the disease, with hypertension, anemia, and renal insufficiency. Albuminuria and edema are seldom prominent. A majority of the patients do not recall an acute attack; but since the histological structure shows conclusively that there was an acute attack, we must believe that the initial symptoms are usually very mild. In thirty cases in which a definite history of an acute attack was obtained the duration of life from onset until death varied from one to twenty-five years, averaging ten years.

At autopsy the kidneys are commonly small and contracted but may be of normal size. There is no constant relation between the duration of the disease and the size of the kidneys. Microscopically a large majority of the glomeruli are

hyaline and their associated tubules have almost completely disappeared. The intertubular connective tissue is relatively increased because of the contraction of the kidney; and this feature is responsible for the old conception of chronic interstitial nephritis.

In all forms of proliferative glomerulonephritis the basic lesion is obstruction of the glomerular capillaries. The tubular atrophy is secondary to the destruction of the glomeruli.

Lipoid Nephrosis

This is also a glomerular disease but the basic disturbance is injury of the capillary wall, i.e., the capillary basement membrane, of such a nature that the blood proteins pass through it into the urine. The term "nephrosis" was first used to designate non-inflammatory diseases of the kidneys; but in this sense it includes a large variety of unrelated diseases such as the bichloride kidney, the amyloid kidney, the kidneys of multiple myeloma, cloudy swelling and lipoid nephrosis. Some writers have used nephrosis in the sense of tubular disease; but some non-inflammatory renal diseases are glomerular, e.g., amyloid disease, and lipoid nephrosis is a glomerular disease. In recent years a majority of writers have restricted the term "nephrosis" to lipoid nephrosis. Many investigators consider it a tubular disease, and others regard it as a metabolic disorder with a secondary effect upon the kidneys.

The onset of symptoms sometimes follows an upper respiratory infection, but frequently there is no antecedent infection and the first prominent symptom is edema. The characteristic symptoms and signs are severe albuminuria with marked edema, hypercholesterolemia, and a decrease of the plasma proteins. One may distinguish a type or stage of the disease in which there is no hypertension or renal insufficiency (pure lipoid nephrosis), and a type in which one or both of these features are present (mixed type of lipoid nephrosis). The great majority of the cases of the pure type persist as such, but a few develop hypertension and uremia after some months or years. The great majority of the cases in children under ten years of age are of the pure type, but in adults the reverse relation obtains.

A majority of the cases of the pure type and all of the mixed type terminate fatally. In the pure type death is due to a complicating infection, usually peritonitis; in the mixed type death is due to uremia or to exhaustion and inanition.

In the pure type the kidneys are enlarged and usually of yellowish color. The proximal convoluted tubules usually contain lipoid droplets, but there is no evidence of a serious functional disturbance. The glomeruli in most instances show no visible alterations, but sometimes a few and occasionally all the glomeruli show definite thickenings of the capillary basement membranes.

In the mixed type there is invariably a marked thickening of the capillary basement membranes with narrowing of the capillary lumens. In those with uremia the capillaries are greatly narrowed by their thick walls and there is a marked disuse atrophy of the tubules. Many glomeruli become hyaline.

The primary disturbance in lipoid nephrosis is injury of the capillary walls causing them to become permeable to the blood proteins. The great loss of protein in the urine depletes the plasma proteins, lowering the colloid osmotic pressure and causing edema. Decrease of plasma proteins lowers the resistance to infection.

When a patient with pure lipoid nephrosis assumes the features of the mixed type no new disease has been introduced. There is merely a progressive thickening of the basement membranes with obstruction of the glomerular capillaries which produces renal insufficiency and hypertension. There is no such thing as a nephritic or nephrotic "Einschlag."

Albuminuria and edema are evidences of glomerular not tubular disease.

Tubular disease is rare in clinical experience and the characteristic symptoms are usually oliguria, anuria and uremia. Two anatomical forms of tubular disease are known, the degenerative and the obstructive. The degenerative form is illustrated by the mercuric chloride kidney. No urine is excreted because all the glomerular filtrate diffuses back through the damaged tubules.

The tubules may be obstructed by casts as in the transfusion kidney, or by masses of crystals as in uremia from excessive administration of sulfonamides.

MSMS

In the swiftly changing world of today many roads are open but the one marked status quo is closed. If the medical profession does not choose where it will go, less competent powers will choose for it.—*Journal Kansas Medical Society,* March, 1943.

Choice of Operation in Cases Requiring Hysterectomy*

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Hysterectomy is a frequently performed operation. The employment of a fixed technique in all cases is inadvisable. The choice of operation should be made to fit individual conditions. Subtotal abdominal, total abdominal, and vaginal hysterectomy all have their place. Practice in active clinics tends to the more frequent removal of the entire uterus. Study of 1500 cases of various types is presented.

■ For some years the question of the method to be employed in removing the uterus has interested men whose work lies in the field of gynecology and obstetrics. For many years, after the possibility of removing the uterus surgically had been demonstrated, the body of the organ was amputated above the level of the vagina. The stages through which the operation passed in its development constitute an interesting chapter in the history of modern gynecology. Of late years many pelvic surgeons have felt that the incomplete removal of the uterus is an operation which, in many cases, is not wholly satisfactory and have made use of the more extended procedure which includes the cervix. Vaginal hysterectomy has come into a wider employment than it formerly had and has been found, in those clinics in which it is used, to be a very useful method of excising the uterus in many cases.

The selection of the procedure to be employed is a matter of judgment. Neither total nor subtotal abdominal hysterectomy should be regarded as the invariable method of attack nor should vaginal hysterectomy be employed in cases not adapted to approach from below. It should be regarded as a principle that the operation should be fitted to the patient rather than that the surgeon should have but one method which he applies to all cases. In choosing the operation a number of factors are to be considered. These are, the disease for which the operation is done, its extent, the parity of the patient, her age and physical condition, previous operations, the condition of the vaginal outlet and the surroundings in which the operation is to be done. One other extremely important matter must be considered, the experience and skill of the surgeon who is to operate and his experience with the various types of hysterectomy.

Many of those who have favored the total removal of the uterus have based their arguments upon the danger of the development of cancer in the retained cervical stump. This danger certainly exists, for in 1934, Von Graff was able to collect 1169 cases. A study of the figures of five large American clinics in 1941 showed that, of all the cervical cancers seen, 4.01 per cent were in the cervical stump which remained after subtotal hysterectomy.

This, in all probability, does not give an accurate figure of the frequency of stump cancer for there are many thousands of women in the country who have undergone sub-total hysterectomy who have never had reason to consult a surgeon again. If all of these were counted the incidence of stump cancer would be less. The danger does exist although it is not a serious one. This reason alone would not justify the removal of the cervix routinely or even frequently unless the operator is a surgeon of sufficient skill that the risk of the total operation is not greater than that of the lesser procedure. Another reason exists which has been emphasized both by Masson and by myself. This is the fact that the retained cervical stump is often an unhealthy mass of tissue which is likely to be the source of discharges and at times of bleeding. The cervical stump which gives rise to a leukorrheal discharge does not respond well to treatment for it has a poor blood supply and is therefore of low resistance. Infections may, in some cases, erode a vessel and cause bleeding. Polyps may form. In a minority of cases the retained stump becomes a focus of infection. All of these causes may necessitate the removal of the retained stump some time after the excision of the body of the uterus. An irritable bladder may cease to be troublesome after the excision of an unhealthy

*Read at the Seventy-seventh Annual Meeting of the Michigan State Medical Society, at Grand Rapids, September 25, 1942.

stump. All of these experiences have occurred in our own work.

It was the comparative freedom from these annoyances enjoyed by our patients upon whom we had done vaginal hysterectomy which caused us to begin the more frequent use of the total operation in those cases in which the abdominal route is employed. These women did not return because of annoying discharges or bleeding. If the condition for which the operation was done was relieved, they required no later treatment for symptoms arising from the cervix.

In any institution in which a considerable amount of work is done, many cases are seen in which a choice of technique must be made. In an active service, devoted to gynecology and obstetrics and staffed by trained men, the choice of procedure should not be influenced by the inability of the operator to do one or another of the possible procedures.

We may pass over carcinoma of the cervix, for in our work, as in the majority of American clinics, the great majority of these are treated by irradiation. We are accustomed to treat surgically only those cases in which the cancer is quite small and definitely localized without possibility of extension. These are not often seen. We do not favor the extended operation with dissection of the lumbar glands. Carcinoma of the corpus, on the other hand, is, in the majority of cases, best managed by total hysterectomy, which need not be of the very radical type needed when cancer of the cervix is attacked surgically.

In dealing with carcinoma of the corpus our preference is for the abdominal operation. The first move, after opening the abdomen, is to place a straight clamp on both sides, parallel with the lateral aspect of the uterus. These preclude the forcing of carcinoma cells through the broad ligaments during the operation, when the uterus must necessarily be handled to some extent. These clamps serve in place of a volsellum forceps, thus avoiding the wounding of the uterine wall. When the operation is done from below, the upper part of the broad ligament is not occluded by clamps until a late stage of the operation, and, as the uterus must be traumatized during the process of delivering it, both by the hands of the operator and by instruments, the likelihood of escape of malignant cells exists. As the carcinoma is in the body of the uterus, the importance of shutting off the possibility of escape from the upper part of the uterus is easily seen. While it is perfectly possible to excise the adnexa vaginally, we like to ligate the infundibulo-pelvic ligament and the round ligament well outside the adnexa at an early stage of the operation and this is more easily done from above.

The surgical management of myomata of the uterus is one of the most common duties of the gynecological surgeon. Many of these are found in women in the middle decades and the majority of women at this time of life have borne children. Cervical damage, therefore, is common. It has been pointed out of late that about one third of the cancers of the corpus are associated with myoma of the uterus. If the case is one of myoma, unassociated with extensive inflammatory residues or endometriosis, and if the surgeon is equipped with sufficient experience to deal easily with a procedure which is somewhat more complicated, the total removal of the uterus is good treatment. If inflammatory or endometriotic pathology is found, it may be wiser to amputate the uterus above the vagina. If the familiarity of the operator with pelvic anatomy and technique is not extensive it may be wiser for him to be content with a supravaginal excision. The majority of our abdominal hysterectomies for myoma for some years have been total.

In some of the cases of myoma is found a good field for vaginal hysterectomy. We have had very satisfactory results with myomata of moderate size, associated with outlet relaxation. Particularly when the cervix is not healthy the removal of the uterus through the vagina offers a means of relieving the patient of the tumor and the cervix and at the same time of doing a necessary outlet plastic. This subjects the patient to much less strain than a plastic followed by a laparotomy. We have found it possible to do these operations, including the plastic work, in nearly all cases in less than an hour. Larger tumors may be removed piece-meal, or morcellated. This is a rather more extensive procedure which had best not be attempted until experience in the vaginal field has become fairly ample. A simple type of morcellation which is often of great assistance when it is difficult to turn the uterus as it is brought out into the vagina, is the amputation of the cervix. This reduces the elongated pear-shaped uterus to a roughly ball-shaped mass which may be turned almost at will.

The delivery of the corpus is often made much easier.

Inflammatory residues often require extensive dissection. The cervix in most of these cases is also unhealthy and, if the uterus is to be excised, the woman will be better off without it. The decision as to its removal will depend upon the difficulty with which the uterus and adnexa are freed from their bed and, again, upon the experience of the surgeon. It may be wise to stop short of the removal of the cervix rather than to expose the woman to greater trauma than she should be expected to endure. When possible it is wise to excise it. When dealing with endometriosis, because of the invasion of the uterine and bowel wall by the adenomatous process, amputation of the body of the uterus is frequently safer than an attempt to remove the cervix, which may necessitate shaving off a layer of uterine tissue.

Functional bleeding in the fifth decade, particularly in the early forties, may be well managed by vaginal hysterectomy. Especially is this so when endocervicitis and outlet relaxation are present. Irradiation in these younger patients subjects them to considerable discomfort because of the surgical menopause. In common with others, we, when the enthusiasm for radium was at its height, treated many cases of functional bleeding by irradiation. The incidence of severe menopausal symptoms caused us to restrict this mode of management to older women, and, as our experience grew, we used radiotherapy for the control of nonmalignant bleeding less and less. A large proportion of these patients are now treated by vaginal hysterectomy, leaving the ovaries intact. In many of them the cervix is unhealthy and some need exists for plastic work. Retrodisplacement in women past the age at which further childbearing is desirable may well be dealt with by vaginal removal of the uterus. Again cervical abnormality and relaxation are frequent. It seems wiser, when the uterus is no longer of value, to remove it by a procedure which is accompanied by very little shock, rather than to do a laparotomy to correct the position of an organ which has served its purpose, leaving the cervix and outlet to be dealt with by another operation.

In most clinics in this country extreme descensus, or prolapse, is dealt with either by vaginal hysterectomy or by some form of the Manchester operation. My preference is for the removal of the uterus with interposition of the broad ligaments under the bladder. The excision of the posterior peritoneal pouch is needed in some cases and the utero-sacral ligaments should be united in all cases. This procedure has been carried out on many old women with no difficulty. One woman in the seventies had a coronary occlusion about a week after the operation but recovered and it was not thought that the operation was to blame. Shock is usually absent and these old patients almost always recover smoothly. The operation is almost extraperitoneal and there is little blood loss.

The results of operations for the removal of the uterus are today in well-staffed clinics, very satisfactory. In a series of 1510 hysterectomies of various sorts in our own clinic the mortality was 0.4 per cent. Of these 795 were subtotal, 230 total abdominal, and 485 vaginal. Vaginal hysterectomy was employed in 32.3 per cent of the cases. During the past two years we have come to employ the total operation much more frequently, in cases done abdominally, than previously. In the year ending March 31, 1942, of 191 hysterectomies, 131 were done abdominally and of these 80 were total. There were 60 vaginal hysterectomies. The uterus was therefore removed entirely 140 times. In this recent series of 191 cases there was no death. They are included in the larger series of 1510. There is no way of removing the uterus without passing through an unaseptic area. Morbidity therefore appears in any series of hysterectomies. Morbidities in the smaller and later series of 191 were as follows:

Totals, 43.75 per cent, subtotal abdominal 47.06 per cent, vaginal 60 per cent. This is calculated according to the standard of the American College of Surgeons which includes all cases in the morbid category which have a temperature of 100.4 degrees on any two days excluding the first postoperative one.

Technique

The decision as to the technique to be employed should be made upon grounds which are anatomically and pathologically sound. The argument is sometimes advanced against the total operation that the removal of the cervix deprives the vaginal vault of support. The cervix, whether the uterus is present or has been removed,

supports nothing. The uterine supports are found at the level of what has been termed the upper pelvic floor and consists of the cardinal ligaments, the utero-sacral ligaments, and the pubo-cervical fascia. All these are merely thickened parts of the supporting diaphragm found at that level. If support is needed, it will not depend upon the type of the hysterectomy but must be provided by a proper utilization of the structures which normally hold up the uterus and the vaginal vault. Every pelvic surgeon of experience has seen patients who have had subtotal hysterectomies and whose cervices have come down. In most of these cases a descensus was present at the time the operation was done but no provision was made for the rectification of the failure of support. In many cases of descensus, unless some contra-indication exists, a vaginal hysterectomy may be done and the supporting structures may be dealt with in such a manner as to ensure the vaginal vault remaining in its normal location. When the uterus is removed totally by the abdominal route, the bases of the broad ligaments, or the cardinal ligaments, should be attached to the angles of the vaginal vault to provide the support without which it may come down. In some of the cases of descensus of the retained stump which have come under my observation it has seemed that an incidental condition was dealt with while the essential one was ignored. For example, a woman upon whom a subtotal hysterectomy had been carried out for a small fibroid while no attention had been given to the marked descensus which was also present. Attachment of the round ligaments to the stump of the cervix for support is useless. The round ligaments have nothing to do with support, being concerned only with the maintenance of the uterus in its normal position. Some gynecologists express a doubt as to the amount of effect they exercise even in this. In any event, they do not support the uterus and recurrence of the descensus is almost inevitable.

In the treatment of marked descensus, or prolapse, one still sees occasionally a patient whose uterus has been attached to the anterior abdominal wall, or upon whom a subtotal hysterectomy with attachment of the stump to the abdominal wall has been done. These cases, practically without exception, have been done by general practitioners or general surgeons whose acquaintance with gynecology is not intimate. The operation has practically disappeared from gynecological clinics. Recurrence of the descensus often takes place and the correction of the condition by a hysterectomy done from below is often difficult because of the false ligament which has formed between the fundus of the uterus and the abdominal wall and which prevents the turning of the uterine corpus out into the vagina either through the anterior or the posterior vault. This method of managing uterine descensus should give way to more efficient forms of treatment based upon accurate knowledge of the mechanics of uterine support.

The training and experience of the surgeon are of great importance in the selection of operation. In clinics in which gynecological operative work is done by a group of men of adequate experience, and in which the bulk of work is enough to maintain a marked degree of operative dexterity, the total abdominal operation appears to be gaining. The frequent use of the total operation, for conditions other than cancer of the corpus, is not justifiable unless the mortality of the operation is the same as that of the subtotal.

In estimating mortality each clinic or hospital should know what its own mortality figures are. To quote to a patient figures given in a paper from some other clinic merely indicates what the risk would be if the patient went to that clinic and do not show what the danger is in the hands of the man who quotes them. The total operation is more difficult, and the danger of injury to the bladder, and particularly to the ureters, is greater. There is more danger of bleeding, both during the operation and afterward. It is not good judgment to assume a markedly increased operative risk to escape a problematic risk of cancer at a later date, especially as only a small minority of the patients will get it. Vaginal hysterectomy, while it presents no difficulties in most cases to those surgeons who have become quite familiar with it, seems difficult to many operators and even gynecologists of many years of experience are, at time, hesitant about adding it to the list of their available operative procedures. The doctor who does his own operative work is wise to make use of the subtotal operation. Vaginal hysterectomy requires an exact knowledge of the relationships of the bladder, ureters, and pelvic blood supply. That it is possible to make use of both of these operations

freely without increasing the danger to the patient is evidenced by the reported figures from a number of clinics. Our own experience has borne this out. We have had a higher mortality in subtotal hysterectomy than in the total abdominal or the vaginal operations. This is because the less extended operation tends to be used in cases in which extensive adhesions are found and the difficulty of removing the uterus is greately increased.

If one will examine a considerable number of cervices microscopically it is easy to see why trouble may occur even though no malignant growth appears. An abnormal degree of epithelial activity may be observed in many cervices in which no suggestion of malignancy may be seen. I do not care for the term precancerous but many of these epithelial changes would be termed precancerous by some pathologists. In any event, the degree of activity is too great for the surgeon to regard it with complete equanimity and the finding of such changes in the microscopic section after operation makes one happy that the cervix has been done away with. In a very recent case, cared for by one of my associates, a tiny lesion was seen on the cervix which could not be identified as cancer. A specimen taken with a punch forceps revealed, under the microscope, a very small but unmistakable cancer. For some time after malignancy has begun it is impossible to identify it as such. Some time ago in another specimen of the uterus, removed in our service, was found an entirely unrecognized cancer. A vaginal hysterectomy had been done for a small fibroid associated with a moderate descensus.

It is not wise to suggest that total abdominal hysterectomy or vaginal hysterectomy be employed routinely by every operator. We do not always include the cervix in the structures removed. The cervix should, however, be carefully studied before operation. If it is quite healthy it may remain; if it is infected or notably damaged, and if the operator feels able to do the total removal without increase of risk, a total operation is better; or the uterus may be removed vaginally unless some contra-indication exists to the employment of that procedure. If an unhealthy cervix is left, it should be dealt with later either by cauterization or by plastic surgery.

The operator of less experience will be wise to make use of the less difficult subtotal operation. The gynecological specialist should be able to do any one of the three types of hysterectomy with sufficient ease that his choice of operation in any individual case is not influenced by his inability to do one or another. A considerable group of cases are very advantageously handled by vaginal hysterectomy. These patients should be given the benefit of the procedure best fitted to the condition which they present. In other words, the operation should be adapted to the patient, not the patient to the operation. In the hands of experts, many gynecological patients may be given the added advantage of the removal of the often unhealthy cervix. Others are wiser to make use of the simple subtotal operation.

MSMS

Medical Aspects of High Blood Pressure (Hypertension)*

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The evidence in favor of hypertension being due to chemical substances liberated from the kidney will be given. It will be shown that the substance named angiotonin when injected into animals and human beings quite closely reproduces the physiologic changes which are known to occur in hypertension produced experimentally in animals and spontaneously occurring in essential hypertension in man. Treatment of the disease in man will be discussed from the surgical and medical point of view. An attempt will be made to indicate that orderly progress is being made in the understanding of this disease which is killing more people than any other.

■ Hypertension is now recognized as probably the chief cause of death in this country. And this is being driven home by the great number of hypertensives being discovered among the

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civilian population by the medical examiners of the army and navy. It is appalling the number of men who are being rejected because of hypertension or being retired from the services.

Serious investigation into the nature of hypertension doesn't go back many years and by the same token most of the subject remains for investigation. Nevertheless, certain very fundamental changes have occurred in our thinking in the past ten or more years which will inevitably affect our bedside practice in the understanding and management of hypertensive patients. These changes in thinking are important, and for this reason, I will list four of them that I consider of especial importance.

1. It has finally come to be realized that hypertension serves no useful function to the body and that it is not necessary that arterial pressure be elevated in order to insure efficient renal function, even though the vessels may be narrowed. Nor is it necessary to maintain adequate perfusion of peripheral tissues. Hence, arterial pressure can be lowered without interfering with bodily function. It should not be forgotten that it is not long ago the opposite was the common teaching.

2. A second change is the realization that hyperactivity of the nervous system is not the primary cause of arterial hypertension though it may play an important part. Most work supports the view that a chemical substance liberated by the kidneys elevates the blood pressure. The nervous system undoubtedly mediates the demands of the body for quick changes in blood distribution, but the long swing changes are caused by humoral agents. There is good reason also to believe that the nervous system is concerned with the maintenance of the reactivity of the body to humoral agents.

3. A third change of great importance is the demonstration that while renal excretory function may be normal in hypertensives, profound changes in the distribution of the blood within the kidneys have taken place. It is plainly and simply incorrect to define essential hypertension as a condition in which renal function is normal. Renal excretory function is, but other functions are not.

4. A fourth change is the elaboration of methods which would reproduce hypertension in animals with fidelity. The two methods now in common use are compression of the main renal artery by means of clamp and compression of the renal parenchyma by the scar resulting from perinephritis induced by wrapping the kidneys in cellophane or silk. These methods have made possible extensive studies into the mechanism of hypertension which would not, for the most part, be possible in patients.

I need not labor the point that these profound changes in the fundamentals of hypertension have taken place. Much of the knowledge has not been appreciated by clinicians in their thinking, nor found application at the bedside.

But without going deeply into the fundamental investigations involved, let me give you a thumbnail sketch of our views on the mechanism of hypertension. We think that reduction in pulse-pressure and possibly temporary drop in blood flow may start the renal vasopressor system into action. What is responsible for this change in pulse-pressure we do not know. An enzyme is contained in the renal tubular cells called renin which is liberated into the blood stream. It acts on the α_2 globulin of the plasma to form a third substance called angiotonin. The globulin incidentally has its origin in the liver. Angiotonin apparently is the substance causing the rise in blood pressure. I want you to note particularly that the rise in blood pressure in both essential, experimental and angiotonin hypertension is of a very special sort. It is characterized by augmentation of the force of the heart beat—hence, the overactivity and enlargement of the heart seen at the bedside; by constriction of the peripheral arterioles without reduction of blood flow—hence the skin and muscles are not pale and bloodless. The changes in the kidneys are peculiar and interesting. In short, the principle change seems to be constriction of the small arterioles proximal and distal to the glomeruli which results in increased pressure within the glomerulus and reduction of peritubular blood flow. The result of this is an artificially elevated urea clearance and reduced ability to concentrate urine; a point of considerable clinical usefulness. More recent work shows that the intrarenal hemodynamics can be more accurately investigated by the insulin and diodrast clearances. Suffice it to say that the former measures glomerular filtration and the latter tubular secretion. In view of the changes of blood distribution I have mentioned, it

is clear why these tests have assumed a place of importance in clinics devoting their time to research on cardiovascular disease. Perhaps we had better term it "angiology," a more inclusive term when one considers the heart is only a specialized portion of the vascular system.

With these notions in mind, it is not difficult to transfer them to clinical practice. For instance, the increased force of the heart beat is most readily appreciated by the hand placed over the precordium. When one has familiarized himself sufficiently with this procedure, a great deal can be learned about the intensity of the stimulus to the heart and its response. Both influence the final outcome especially as regards the myocardium.

The special type of arteriolar and small arterial constriction can be seen and studied in the eyegrounds. And thus, examination and thorough familiarity with the ocular fundi is essential to the proper evaluation of any patient with elevated blood pressure. There is no substitute for the careful and repeated examination being performed by the internist himself. This is the place the intensity of the vasoconstriction may be measured, the earliest signs of degenerative changes detected, and the signs of necrotizing arteriolitis, papilledema, retinal edema and detachment, thrombosis, etc., first noted. If I were required to give up all other examinations but one during the investigation of a hypertensive patient, I would retain the pleasure and privilege of examining the eyegrounds.

There are many other clinical applications of these principles but these examples will, I hope, illustrate my meaning. The adequate examination and "pedigreeing" of hypertensive patients has now become an elaborate procedure in terms of the examinations given only several years ago. And at the same time marked improvement in the accuracy of prognosis and diagnosis has occurred. We hope it is also leading to much more convincing results obtained from observation of experimental treatments. As you are aware, many of the claims made for treatments were not made dishonestly but the observer was fooled by the natural variability of the disease. There is less and less reason for such mistakes in the future.

Treatment of hypertension is still an experiment. Practicing physicians are naturally anxious for practical means of handling hypertensives and are sometimes impatient with the bumbling efforts of investigators. Brother investigators are with less reason impatient and deserve a gentle but firm rap on the knuckles for it. Impatience leads to forced conclusions rather than the truth.

To our minds at the Lilly Clinic, we believe that when the operation is adequate, sympathectomy has its place in the management of hypertensive patients. The selection of patients requires care and experience. Its good effects are not due, as has so often been erroneously stated, to increased blood flow in the kidneys.

Thiocyanate is also a useful drug in our experience, which now comprises some 500 patients. As you know, it should not be used without chemical control and should not be given merely to be giving something. Some patients do not respond favorably and its use in those individuals should not be continued.

Purified renin has not in our hands been able to lower blood pressure in dogs or rats with experimental hypertension even when pellets of renin were implanted. Since we had no success in animals we have not tried it in patients. Wakerlin states that he is doing this, and his report will be awaited with interest.

We have tried large doses—in fact double the dose recommended—of vitamin A in patients but found no change in blood pressure in our "pedigreed" patients. We would not say that when the material is given in even larger doses or over longer periods of time that it is without effect. It may well be that impurities play some part when excessively large doses are employed. Vitamin A or some associated impurity can increase renal blood flow. We have not tried it in dogs but Wakerlin recently published that it lowered blood pressure in dogs with experimental hypertension much as did renin in his experiments on that subject.

We have had no experience with tyrosinase. Schroeder thinks that it reduces blood pressure because of the enzyme in the solution. Apparently others think this also while still others consider the results purely a result of impurities other than tyrosinase.

So-called "nonspecific" therapy has been used for many years with occasional good results. The term itself is almost meaningless and might well be dropped but its use is so current that this would be difficult. Typhoid vaccine given intravenously *to patients with renal disease* may cause

serious loss of renal function. We doubt if it should be given by vein at all to patients with renal disease as a therapeutic measure. Scott has recently claimed that results quite as good as observed with kidney extract can be obtained with milk injections. It will take several years of work for us—at least—to have any sound opinion on this observation. If it works, it will be a godsend, and we all hope it does.

There is good physiological evidence to suggest that the kidneys contain an antipressor agent, hence the search for it. To date it has, I think, been shown that kidney extracts of special sorts can lower blood pressure, reverse many of the retinal changes of the malignant syndrome and alter the change in distribution of blood within the kidney towards normal. I have no idea how kidney extracts work nor whether they are "specific" or "nonspecific." At present we are working along the lines that an enzyme—angiotonase—which is present in large amounts in some of these extracts is the active agent. We don't know whether this is true or not.

I hope you will agree that we are gathering evidence of sufficient importance to help dispel the prevalent appalling indifference to this greatest of public health problems.

MSMS

TANTALUM FOR REPAIRING SKULL DEFECTS

Experimental studies indicate that the mental tantalum is a satisfactory material for the repair of defects of the skull, Lieut. (jg) Robert H. Pudenz, Medical Corps, U. S. Naval Reserve, reports in *The Journal of the American Medical Association* for February 13.

Tantalum is an element, the seventy-third in the periodic table. It is a bluish white metal resembling steel in its physical properties and glass in its chemical characteristics. It has an atomic weight about three times that of iron.

Lieutenant Pudenz says that "It has the desirable qualities of noncorrosiveness, inertness in tissue, nonabsorbability, absence of toxic [poisonous] ingredients and malleability. This last quality enables the surgeon to form the flat tantalum sheet to the desired contour at the operating table. In view of these characteristics, the use of this metal should be considered in the repair of many of the cranial defects which will inevitably occur as a result of craniocerebral [skull and brain] injury in the present war, and particularly in those repairs in which a satisfactory cosmetic result is of utmost importance."

The Therapy of Nevi

Their Relationship to Skin Malignancies*

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In dealing with a subject so comprehensive, it will be necessary to limit the discussion to the two principal types of nevi, namely the vascular and the pigmented. Despite many advances in therapy there still are decided differences of opinion as to which nevi should be treated and which should be left alone. Some suggest leaving them alone so that they may either disappear spontaneously or because of fear that treatment might convert a quiescent benign nevus into a malignant one. Such basic considerations in individual cases must be carefully weighed to determine the best procedure to be followed. If errors in judgment and management occur at this time, the most favorable opportunity to achieve a good result is usually lost and subsequent treatment becomes proportionately more difficult and unsatisfactory. Since some nevi may give rise to malignant growths, this fact must also determine our course of action. Fundamentals and actual procedures will be discussed in detail.

▪ Most physicians feel themselves competent to treat nevi of all types. I would hesitate to discuss so prosaic a subject were it not for the fact that most surgeons are not trained to make pre-operative diagnoses and hence frequently make wide excisions and obtain poor cosmetic results when other methods would have proved far more satisfactory. Dermatologists on the other hand not infrequently fail to employ surgical methods when they are imperatively indicated. Furthermore, differences of medical opinion still arise as to choice of treatment of certain nevi when a thorough familiarity with the subject would eliminate such confusion of thought. My reason for again writing on this subject is to try to eliminate this confusion and to standardize therapy.

Many dermatologists believe that *none* of the vascular nevi should be treated. They point out that with the exception of the "port wine" marks,

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few of these lesions are found in adult life—hence they are of the opinion that the majority of them must have disappeared spontaneously. I do not believe that this is true. Conceding the fact that most of them are no longer present when adult life is reached, I think that in the majority of instances this was accomplished by suitable treatment. What happens to the untreated cases? My investigations indicate that a small percentage either remain unchanged, or may actually increase or slightly decrease in size. The point is that they do not all disappear. Furthermore, when nature undertakes to destroy an angioma for example, she does not always do a creditable job—in fact the majority undergo spontaneous involution as a result of infection and ulceration. If the ulceration is superficial the scar may be inconspicuous, but if the process is deep, an ugly scar may result. Children are quick to note and comment on birthmarks in other youngsters and while this should not cause an inferiority complex, most parents like to avoid the possibility. A neglected vascular nevus becomes increasingly difficult to remove as the child grows older.

If an anxious parent can be given reasonable assurance that her child's nevus can be destroyed by careful treatment, in most instances without scarring, is it wise to suggest to her to await developments, the exact nature of which no one can foretell? I do not believe that it is. I feel that it is better to recommend treatment at the earliest moment since, then, therapy requirements for effective results are minimum.

If treatment is decided upon, what method is best for the various types? Admittedly, each case must be individualized, but the accompanying outline will give you in order of their choice, the therapy best suited for each type. Where two methods are, in my opinion, of about equal merit, I have indicated this by the use of brackets.

Inasmuch as most physicians are no doubt thoroughly familiar with the outlined therapy only a few explanatory comments are necessary. In the case of the flat (nevus flammeus) nevi, unless the lesion is small and favorably located, I believe it better to leave this type of mark alone. Large lesions when not treated with applications covering the entire mark at one time may develop a checker-board appearance that may look worse than the original defect. Radium applications should not be followed by the use of solid ice but the reverse is permissible.

TREATMENT OF VASCULAR NEVI

I. *Flat* (Nevus flammeus):
  1. No treatment—use cover if feasible.
  2. Massive doses ultra-violet light preferably with pressure through quartz applicator.
  3. Solid ice
  4. Light desiccation
  5. Radiation
     - Grens rays
     - Radium
     - Thorium paste

II. *Raised* (angiomas)
  1. Radium
     - Surface application
     - Needle insertion
     - Radon
  2. No treatment—await possible spontaneous disappearance
  3. Solid ice
  4. Injection of sclerosing solutions
     (a) Quinine urethane
     (b) Sugar
  5. Surgical excision
  6. Cautery
     (a) Hot
     (b) Cold

III. *Deep* (cavernous angiomas)
  1. Radium (insertion or application on block)
  2. Injection of sclerosing solutions
  3. No treatment (Spontaneous disappearance)
  4. Surgical excision.

IV. *Lymphangiomas*
  1. Cautery
     - Hot
     - Cold
  2. Radium (Contrary to the belief of many, radium results often satisfactory)
  3. Solid ice
  4. Surgical excision

V. (a) So-called *senile* angiomas
     1. Cautery puncture
  (b) "Spider" nevus (Nevus araneus)
     1. Electrolysis
     2. Cautery puncture

In the raised and deep vascular nevi (angiomas) radium has been given first choice over solid ice and sclerosing solutions because of its safety (deaths from sclerosing solutions have occurred, though so far as I know, have not been recorded), and its lack of pain or discomfort following the treatment. When using radium it is essential to start therapy early, give small suberythema doses, with long intervals between the treatments. In the case of spider nevi, especially in infants or small children, electrolysis is much safer than cautery puncture and also less painful and less likely to give rise to a tiny pitted scar.

The problems are not as simple when dealing

with the group of pigmented, hairy or warty nevi. This is in part due to the mixed or combination varieties that occur and also because a large number of other skin tumors or granulomas simulate these lesions. For example, when we were selecting specimens of the intradermal nevus ("common mole"), of the first 80 selected, 11 proved to be early basal cell epitheliomas, fibromas, triecho-epitheliomas, connective tissue nevi, etc. Such mistakes I am sure, explain some of the erroneous ideas that the intradermal nevus can terminate in any of the types of epithelial cancer.

When one listens to or reads the discussion of various physicians, one realizes that it is difficult for some to understand the full meaning of the term "benign." They speak of a "benign" lesion which on removal gave rise to widespread metastasis. If the lesion had been benign and had been properly removed that would have been the end of it. I stress this point because I have always recommended the removal of nevi —especially questionable types—while it was safe to do so. In other words, while they were benign. If there is any question in the physician's mind as to the innocent character of a skin lesion, either a biopsy or a wide excision should be done to settle the point. Were this done regularly, much difficulty would be spared the patient and if the cosmetic result was not perfect—that can easily be remedied later. When dealing with a malignant growth in this group, only the most radical surgery should be employed.

TREATMENT OF PIGMENTED, HAIRY AND WARTY NEVI

I. (a) *Intraepidermal Nevi:* (Warty, hard always, pigment varies, hairs usually not feature.) Changes in this type occur solely in the epidermis and the group includes the hard warty nevi, the linear warty nevi, the nevic type keratomas and the purely epithelial growths.
   1. Desiccation followed by curettement (or curettement alone)
   2. Radiation { x-rays / radium }
   3. Solid ice
   4. Surgical excision

   (b) May terminate as squamous or basal cell epitheliomas.
   1. Surgical removal
      (a) Electric cutting current
      (b) Scalpel
   2. Radiation
   3. Combination of above

II. *Junction Nevi* (Epidermal-dermal junction) (Pigmented always (rare non-pigmented lesions excepted) soft warty sometimes, hairs usually absent.) Group includes some of the lentigines, especially lentigo maligna, nevus spilus, nevus pigmentosus and those in which the changes are taking place at the epidermal-dermal junction.
   1. Excision { Scalpel / Electric }
   2. Radiation—*never*
   3. Solid ice or chemical applications—*never*

   May terminate as malignant melanomas.
   1. Excision
   2. Radiation may be used as supplemental therapy or in inoperable patients.

III. *Intradermal Nevi* (soft warty always, pigment varies, hair usually present). This is the so-called "common mole." The lesions comprise nevus pigmentosus et verrucosus et pilosus although all lesions need not be hairy or definitely pigmented. The changes all are to be found in the cutis.
   1. Desiccation
   2. Electrolysis
   3. Surgical excision

   Does not terminate in malignant growth.

IV. *Blue Nevi* (pigmented only)
   1. Excision
      (a) Scalpel
      (b) Electric

   May terminate as melanosarcoma in rarest of instances.

V. *Mixed or Combination Types*

   These cause confusion which can only be eliminated when microscopic examinations are carried out in doubtful cases in conjunction with other appropriate treatment.

   Since these lesions consist of mixtures of any of the above types many combinations are possible. We found the following combinations fairly frequent: intraepidermal and intradermal nevi, junction and intradermal. Other combinations, such as intradermal and blue nevus, et cetera, were rare.

The intraepidermal nevi are not dangerous lesions and can usually be relatively easily identified by their superficial character. For greater details as to the clinical lesions included in this classification, which has a purely histologic basis, the reader is referred to two previous articles.[1,2] The hard warty nevi rarely terminate in cancer —the nevic type of keratoma (seborrheic keratoma) probably only slightly more frequently.

The epidermal-dermal or junction type nevi are by far the most intriguing as well as the most dangerous group. Here it is frequently impossible to be certain clinically whether the growth is benign or malignant.

For this reason I believe that applications of

solid ice or chemicals, are contra-indicated. One only needs to follow a single patient so treated to the autopsy table to realize how easy it is to mistake a malignant melanoma for a benign pigmented nevus and to know that such deaths are entirely preventable.

Case Reports

A few brief case reports to illustrate:

Case 1.—Miss C. A. J., aged fourteen, had a "benign" pigmented nevus on the left leg treated with solid ice by an exceedingly competent dermatologist. Within a year a number of pigmented satellites appeared about the treatment site. Removal for diagnostic purposes proved the growths to be metastatic melanomas. Amputation of the leg was advised but refused. Local metastasis continued to appear on the leg for several years and this was followed finally (within six years) by general metastasis and death.

Case 2.—Mrs. W. N., aged forty-seven, had a small smooth "benign" pigmented mark on the bridge of the nose treated with solid ice. First local metastasis to surrounding skin followed by a general process.

Case 3.—Baby A. Z., aged two years, was born with a large brown pigmented nevus on the left cheek measuring about 2½ m.m. in diameter. With the exception of a small area in its center which was brownish black the color was a uniform dark brown. Fine inconspicuous downy hairs were present so that hairs were not an essential feature of the lesion. The nevus increased in size only in proportion to the growth of the child. The patient was presented before a medical society for therapeutic suggestions. Several men suggested the use of Co_2 snow. As the area was rather large I felt that a better cosmetic result could be achieved by plastic surgery and also the area in the center was not above suspicion as a malignant melanoma. This was confirmed on removal by the laboratory, their report being, malignant melanoma. Since less than a year has elapsed since excision the final outcome cannot be stated. There is no question, however, but that Co_2 used on a malignant lesion—mistaken for a benign one—would have been disastrous.

Briefly, when in doubt, all lesions belonging in the group of the pigmented, hairy, and warty nevi should be either excised or biopsies should be performed. This is especially important in the case of the so-called junction nevi where microscopic confirmation is always imperative. Although the blue nevi are practically always innocent the only satisfactory way to get rid of them, because of their depth, is by excision. The common mole and the intraepidermal nevus will safely tolerate dessication, Co_2, and the less radical forms of therapy. Strict adherence to the outlined therapy will prove to be decidedly advantageous.

References

1. Traub, Eugene F., and Harry Keil: The "common mole," its clinico-pathologic relations and the question of malignant degeneration. Arch. Derm. and Syph., 41:214-249, (February) 1940.
2. Traub, Eugene F.: Congenital anomalies (nevi) and their relationship to cancer. Penn. Med. Jour., 44:1103-1110, (June) 1941.

ARMY'S 1943 RECRUITING PROGRAM WILL REQUIRE 6,900 PHYSICIANS

The 1943 recruiting program of the Surgeon General of the Army calls for the commissioning of 6,900 physicians and approximately 3,000 hospital interns and residents, it is reported in *The Journal of the American Medical Association* for March 13 in an outline of the new procedure of processing physicians, dentists and veterinarians for the Army. The program also calls for the commissioning of 4,800 dentists and 900 veterinarians.

Physicians will be procured from the following twenty states and the District of Columbia: California, Colorado, Connecticut, Illinois, Iowa, Maryland, Massachusetts, Minnesota, Missouri, Nebraska, Nevada, New Hampshire, New Jersey, New York, Ohio, Oregon, Pennsylvania, Rhode Island, Vermont and Wisconsin.

It is stated that at present there will be no procurement of physicians, except interns and residents and in special cases for specific position vacancies, in those states not listed above.

In the instructions issued by the Army it is pointed out that the Surgeon General has discontinued all medical officer recruiting boards.

In each state the Procurement and Assignment Service has set up three state chairmen: medical, dental and veterinary. Each of these prepares a monthly quota list of physicians, dentists and veterinarians who are apparently suitable and who are available, for commissioning in the Army of the United States. This list is submitted to the central office of the Procurement and Assignment Service which sends a communication inviting such individuals to apply for service with the armed forces. On the reply card enclosed with the invitation the individual states his preference for the Army, Navy or Medical Department of the Air Forces. These reply cards are sent by the potential applicants to the state chairmen of the Procurement and Assignment Service who in turn submit lists of such potential applicants to the Officer Procurement Service of the Army.

On receipt of such lists the officer procurement district office contacts the potential applicant and arranges for an interview regarding a commission.

The decision as to the grade and appointment to be recommended for each candidate rests with the Surgeon General, not with the Officer Procurement Service.

The General Practitioner of Medicine

IN THESE days of warfare the newspapers are filled with the names of military leaders. Occasionally, a news story will carry the name of a private who has been on the front line and has borne the brunt of the enemy's onslaught. In the field of medicine, also, the names of medical leaders and specialists appear in the public press and on the programs of national and state meetings, but little is said about the general practitioner of medicine who, regardless of time, place, and weather, renders service to 80 per cent of the people needing medical care.

The general practitioner of medicine, or the family doctor as he is affectionately designated by most people, has always stood in the front line in the battle against disease. Only rarely has his splendid, unselfish work been recognized by the organized medical profession. There are signs today that the physicians who bear the larger share of the load of rendering medical service are being appreciated. One of the signs is the development of extramural postgraduate medical education. Most of the specialists, through specialty meetings and publications, keep abreast of the times in their own fields, but for years no such opportunity has been available to the general practitioner. Today the advances in medicine are brought to him through planned conferences on medical progress, so that he is able to render better service to his patients. Another sign of recognition is the fact that the American Medical Association and several state societies are devoting part of their annual deliberations to a consideration of the problems of the general practitioner.

Scattered over our state are many modern, general hospitals. The staffs of these hospitals are as a rule made up of the most progressive members of the profession. Many good general practitioners of medicine are excluded from working in these institutions, but their referred work is gladly received. Hospital affiliations and staff memberships would be stimulating to most of our family doctors; they have earned these privileges. Undoubtedly, it would be necessary to have hospital supervision and advisory guidance but the benefits of advice and consultation to the general practitioner and to his devoted patients would be unlimited. The problem is not a simple one, but it offers a challenge of solution to the Michigan State Medical Society.

W. H. Cummings

President, Michigan State Medical Society

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President's



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EDITORIAL

MEDICAL MEETINGS

■ The American Medical Association and many other national groups have cancelled their annual meetings for the duration of the war, as a means of conserving transportation, and as a patriotic duty. Smaller, state groups have in some instances followed suit. Cancelling the Michigan State Medical Society 1943 meeting was considered, but the Council after due deliberation vetoed the idea. Other states have followed the suggestion, notably Texas, Nebraska, Ohio, with a one-day meeting, et cetera.

If there was ever a time when these meetings were needed for their moral and educational value, this is it. With our national meetings gone there is still necessity for educational purposes. Medical men can still write papers and have them published in the Journals, but they are only read, the reader losing the personal touch of seeing and possibly meeting and talking with the essayist. The tone and inflection of voice and the nuances of expression are impossible to transmit to the printed page.

Doctors doing two or three times their regular amount of work have little time during office hours to do any reading, and when they get home at night they are so completely exhausted the only thing they feel like reading is some interesting story, or some light reading. Medical articles are laid aside for some time when they feel more in the mood. We know the feeling, but that means new medical information must be secured by the more painless method. The medical meeting, no matter how small, is the opportunity. And the most valuable part of medical meetings is likely to be in the halls and cloak rooms, where a few get together and discuss their many problems. That contact which most of us prize so highly will be denied to us so far as the national society is concerned, but has been retained in Michigan.

Medicine is progressing rapidly as a result of war opportunities and research, and those advances will be brought to us at our meetings much more effectively by contact and personal word than is possible by publications. With such rapid changes of ideas and practice taking place, now is the time when our members should miss no opportunity for exchange of ideas and opinions. We should attend every county, district or state meeting that occurs. It is difficult to arrange good programs such as obtained before the war, but meetings should be held even if there is no set program. Some member will be able to make a worthwhile suggestion, and after the start has been made others will follow.

Even impromptu county society and staff meetings are packed with good from which all may profit.

THE SEVENTY-EIGHTH MEETING

■ The Committee on Scientific Work of the Michigan State Medical Society, which is preparing the program for the seventy-eighth annual meeting, is hard at work, and will produce another of those wonderful meetings for which our society is justly famous. It is permitted to announce that James E. Paullin, M.D., of Atlanta, Ga., now president-elect, and in September to be the president of the American Medical Association, has accepted an invitation to be present; also Sister Elizabeth Kenny who attracted much attention at our meeting in Grand Rapids last September. Other names of national fame have accepted, and will be announced in time.

The meeting this year is being stressed as a War Postgraduate study course, and a "must" in the program of every one of us. The meeting will be held in Detroit at the Hotel Statler.

POSTWAR DOCTORS

■ What of the supply of Doctors of Medicine for the near future? For after the war, or after the students now in college have finished their training? The outlook is somewhat uncertain, but some facts have become apparent. The teenage boys will be taken into the armed forces. That would curtail the premedical courses, but the Army and Navy departments have intimated that *they* will select from those available, estimated to be about 30,000, about five or six thousand to take a "telescoped" premedical course. The present three years required by

many schools and states will be reduced to two and that "telescoped" into 15 to 18 months. They will then go into the Medical School where the four-year course will be accomplished in three years as under the present plan.

They will not be college students, but privates, soldiers or sailors, being sent to school for technical training. They will be in uniform, under a commanding officer, getting full maintenance and tuition. This will constitute 80 per cent of the medical students. The others will be made up of women students and men who cannot pass the physical examinations.

Such a program or a similar one is quite obviously necessary, but what of the future of medicine? The short term squeeze, and the lessened premedic training will make for less well-trained medical practitioners. Why can we not continue to produce well-trained doctors? Now is the time to get them started, truly, but is it wise to reduce the requirements below the standards now set? America has the best trained doctors of medicine in the world. If the war necessities cannot be met without reducing our standards we should restudy those war necessities. We must win the war. And we must provide for the future health of our people. We reluctantly agree with the "telescoping" of these courses, but believe that will reduce scholarship. We do not willingly agree to lessening standards. These standards must be maintained or increased.

KEEP WELL CRUSADE

■ This crusade originated by the Institute on Life Insurance and conducted by public spirited insurance agents in their communities urges to the public five fundamental rules of health: (1) Eat right; (2) Get your rest; (3) See your doctor once a year; (4) Keep clean; (5) Play some each day. The crusade emphasizes to the layman: "Physical fitness on the home front means more planes, more tanks and more ships for our fighting forces. It means increased morale. It means decreased strain on those members of the medical and nursing professions who remain on that home front. Such physical fitness can, we are assured, be achieved by the promotion of health activities in all communities and by the spreading of the message of the five fundamental rules of health."

During 1943 the Keep Well Crusade will continue and will increase in importance because the war production needs of the nation demand the continued good health of the nation. Maximum participation depends on continued good leadership, not only of public officials, but of natural leaders, such as Doctors of Medicine.

BUY WAR BONDS

■ Last month we published the list of our fellow doctors who are in the armed forces, helping to their utmost in the effort to end the War. Are we doing as much? Have we done as much as we can? Those of us left at home are denied the personal efforts of the soldier and sailor, but there is a way to add our might. *Buy War Bonds.* Ten per cent has been asked, but every one of us should do more than what has been asked. It is a pleasure to buy war bonds, and a satisfaction in having done the one thing left for some of us. BUY MORE WAR BONDS.

Communication

Chicago, Illinois
March 19, 1943

Dr. Wilfrid Haughey, Editor
Dear Doctor Haughey:

Your organization will undoubtedly receive a formal invitation to our Annual Meeting, May 18, 19, 20, 1943, but we would like to write you personally asking that you give the meeting whatever boost you can.

Inasmuch as our national medical meetings are to be eliminated we are endeavoring to make this as beneficial to the profession as a whole as is possible.

To keep in touch with recent trends we are setting aside a special Army Day and a special Navy Day. Military medicine will be featured on these days and will do much toward keeping us abreast of these developments.

Conventions have always proven a splendid place to renew old friendships and as an adjunct thereto golf will be on the cards both for individual and tournament play. As usual, of course, the ladies will be provided for through the auxiliary organizations.

Convention headquarters will be at the Palmer House which is splendidly equipped for our purposes with its many exhibition rooms, conference rooms and parlors.

Members in good standing of your organization, being our own good neighbor, will of course be free of any obligation as far as registration charges are concerned. We will be happy to welcome them and promise an outstanding effort in their behalf.

Very sincerely yours,
H. K. Scatliff, M.D.
Chairman, Publicity Committee
Illinois State Medical Society

THE ANNUAL MICHIGAN POSTGRADUATE PROGRAM FOR GRADUATES IN MEDICINE

The Michigan State Medical Society, in coöperation with the University of Michigan medical School, Wayne University College of Medicine, the Michigan Department of Health, and the Wayne County Medical Society, announces the postgraduate courses for 1943.

INTRAMURAL COURSES

University of Michigan Medical School, Ann Arbor

Recent Advances in Therapeutics ..... May 10, 11 and 12
Anatomy ..... February 4—May 20 (Thursdays)
Diseases of Blood and Blood-Forming Organs..... May 3-7, inclusive
Diseases of the Heart..... May 12, 13 and 14
Electrocardiographic Diagnosis ..... November 15-20, inclusive
Gastroenterology ..... May 3, 4 and 5
Laboratory Technique ..... April 26-30, inclusive
Nutritional and Endocrine Diseases of Childhood..... May 12, 13 and 14
Ophthalmology and Otolaryngology..... April 26-May 1, inclusive
Personal Courses ..... Throughout year
Roentgenology ..... April 12-16, inclusive
Summer Session Courses..... June 28-August 20

Anatomy ..... 8 weeks
Bacteriology ..... 6 and 8 weeks
Biological Chemistry ..... 8 weeks

Wayne University College of Medicine, Detroit

The Summer Sessions Announcement will contain a more detailed description of these courses and may be had upon request from the Dean of the Medical School, University of Michigan, Ann Arbor.

The courses listed below are open to practitioners of medicine. If credit is desired for an advanced degree, one should examine the bulletin of Wayne University College of Medicine. The numbers in parentheses refer to the numbers of the courses as they are listed in the bulletin.

Fees for the following courses vary. Specific information can be obtained at the office of the College of Medicine.

Anatomy
(301) Gross, Microscopic, and Developmental Anatomy...Both semesters
(302) Neuroanatomy and Neurophysiology .....First Semester
(303) Topographic and Applied Anatomy .....Second Semester
(308) The Endocrine Glands..... First Semester

Physiology
(309) Physiology of the Endocrine System .....First Semester

Physiological Chemistry
(202 Nutrition .....Second Semester

Pharmacology and Therapeutics
(303) Physical Medicine..Second Semester
(309) Therapeutics .....Both Semesters

Pathology
(203) Hematology.....Second Semester
(204) Parasitology and Mycology.... Second Semester
(302) Tumor Clinic .....Both Semesters
(307) Gynecologic Pathology..... First Semester
(310) Diseases of the Kidneys..... Both Semesters
(313) Neuropathology .....First Semester
(315) Pathology of Tuberculosis..... First Semester
(316) Pathology of Neoplasms..... Second Semester
(317) Pathology of the Heart and Blood Vessels.....First Semester

Bacteriology and Clinical Pathology
(202) Clinical Pathology.Second Semester
(305) Immunology...Time to be arranged

Medicine
(306) Medical Pathological Conference Both Semesters
(307) Diagnostic Conference ..... Both Semesters
(308) Electrocardiography ..... First Semester
(309) Therapeutic Conference..... Both Semesters

Neuropsychiatry
(309) Psychotherapy .....Both Semesters

Dermatology and Syphilology
(308) Seminar .....Both Semesters

Hematology Clinic
Hematology Clinic .....Both Semesters

THE ANNUAL MICHIGAN POSTGRADUATE PROGRAM

(Continued)

EXTRAMURAL COURSES

Ann Arbor	April 13 and May 11
Bay City	April 14 and 28
Flint	April 13 and 27
Grand Rapids	April 13 and May 11
Jackson	April 6 and 20
Kalamazoo	April 20 and 22
Mt. Clemens	April 14 and 28
Traverse City	April 14 and May 12
Upper Peninsula (Sault Ste. Marie, Marquette, Houghton, Ironwood and Powers)	May 24-28, inclusive

SUBJECTS

The Diagnostic Significance of Pain. Panel Discussion.
Recent Advances in Obstetrics.
Recent Advances in Immunization Procedures.
Newer Concepts in the Diagnosis and Management of Diseases of the Liver. Clinical Dialogue.
The Differential Diagnosis and Management of Hypertension.
The Indications for and the Use of Plasma in Transfusions.

Further information may be obtained upon request.

Committee on Postgraduate Medical Education
Room 2040, University Hospital
Ann Arbor, Michigan

MICHIGAN CRIPPLED CHILDREN COMMISSION

STATISTICS ON CRIPPLED CHILD ADMINISTRATION, MICHIGAN

For Year Ending June 30, 1942

(Official Figures of the Michigan Crippled Children Commission)

Total number of cases (in-patients and out-patients)	4,274.
Total number of institutional days' care	107,317
Average number of days' care per case	28.1
Total dollar expenditure	$441,267.28
Total expenditure per case	$ 103.24
Paid to hospitals (acute & convalescent) (Cost of foster homes, and of braces, not included)	$362,733.19
Expenditure for hospital care per case (in-patients & out-patients)	$ 84.87
Average expenditure per day for hospital care (acute & convalescent)	$ 3.38
Per cent of total paid to hospitals (acute & convalescent)	82.2%
Paid to physicians (in-patients & out-patients)	$ 50,164.86
Expenditure per case for physicians's care	$ 11.74
Average expenditure per day for physician's care	$ .47
Per cent of total expenditure paid to physicians	11.37%

STATISTICS ON AFFLICTED CHILD ADMINISTRATION, MICHIGAN

For Year Ending June 30, 1942

Total number of cases	8,042
Total number of hospital days' care	125,509
Average number of days' care per case	16.2
Total dollar expenditure	$556,254.67
Total expenditure per case (in-patient)	$ 69.16
Paid to hospitals (in-patient care)	$410,421.61
Expenditure for hospital care per case (in-patients & out-patients)	$ 69.17
Average expense per day for hospital care (acute & convalescent)	$ 3.27
Per cent of total expenditure paid to hospitals	74.379%
Paid to physicians	$140,713.10
Expenditure per case for physician's care	$ 18.33
Average expenditure per day for physician's care	$ 1.12
Per cent of total expenditure paid to physicians	25.501%

YOU AND YOUR BUSINESS

SUCCESS IN THE LEGISLATURE, WITH THANKS TO OUR LAWMAKERS

A successful legislative experience was the lot of the Michigan medical profession in the ninety-day session which recently came to an end. During this short and efficient meeting, some excellent health and medical bills were enacted into law, while a number of proposals inimical to the health of the people were killed by the Legislature, not without a struggle. Chief among the "good" bills were the amendments to the Afflicted-Crippled Children Acts, the act to control barbiturates, and the act giving permission to Detroit and Wayne County to build a Wayne University Hospital. On the "bad side" can be listed the ambitious chiropractic and naturopathic requests, and the proposed amendment to the Workmen's Compensation Act to allow free choice of "physician" (including healers other than doctors of medicine).

A more complete report on the proposals which fully occupied the time of the MSMS Legislative Committee will be published at a later date.

Most sincere thanks are extended to the members and officers of the Legislature, to Governor Kelly and Lieut. Governor Keyes, for the courteous reception they extended to the representatives of the medical profession as well as for the thoughtful consideration they gave to medical and health measures coming before them.

VOCATIONAL REHABILITATION

For the balance of the fiscal year—to June 30, 1943—the State Board of Vocational Education is authorizing certain physical restoration services, including medical care, surgical repair, physical therapy, and occupational therapy, for rehabilitation cases, on the following conditions:

1. If it will assist the physically disabled to become employable.
2. If recognized hospitals, doctors, physical therapists, and occupational therapists are used.
3. If no other method of financing physical restoration service is available.
4. If the expenditure in each case is reasonable in amount.

Procedure: first, a medical report is to be made, preferably by the family physician; other consultation may be required. Application for aid shall come chiefly from (a) the applicant himself; (b) the Bureau of Social Welfare; (c) the employment bureau; (d) the physician making examination. If the applicant has not gone to local social agency he is referred back before further action is taken.

Second, financial standing of patient is investigated; aid is not given if patient or some other interested party is able to pay.

Third, free choice of physician will prevail.

Fourth, fees will be based on the fee schedule of the Michigan Crippled Children Commission; if local fees are less and are accepted by the medical profession for the care of afflicted adults, this fee schedule will prevail.

The Vocational Rehabilitation Department of the State Board of Vocational Education will be glad to receive recommendations from county medical societies regarding participants in the medical and surgical services, and suggestions concerning the administration of this work. Further, the Board has instructed its agents to contact the county society secretary when cases arise in the county.

PROGRAM OF THE NATIONAL RESOURCES PLANNING BOARD

Under "Health," the NRPB report which was recently presented to Congress by President Roosevelt would broaden the federal health program.

The present U.S. laws permit grants to states for medical and child health services, for aid to the physically handicapped, as well as for the variegated health work done by the United States Public Health Service.

The proposed NRPB federal program is designed "to meet needs of our people for more adequate care." Stress is placed on maternal and child health; and surplus food commodities would be made available to the entire low-income group.

The American program is not as broad as Britain's Beveridge Plan which would include comprehensive medical insurance and treatment, including hospital and dental care, nursing and convalescent homes; also post-medical rehabilitation.

News Week's Periscope of March 22 reported: "Washington observers credit American Medical Association opposition for the Planning Board's failure to include socialized medicine in its postwar security program."

PERMANENT ADDRESS

Problem of Frequent Changes of Address.—This arises mainly because physicians in military service are being transferred frequently from camp to camp.

The Council earnestly desires that the JOURNAL MSMS shall be received monthly by every military member.

It invites and urges physicians in Service in the United States to certify to the State Society a *permanent address* (i.e., family residence, relative, bank, or trust company) to which THE JOURNAL may be sent, for purposes of prompt forwarding to the final address; if no permanent address is furnished, THE JOURNAL will have to be discontinued where one or more copies are not delivered. (When one's address is changed, THE JOURNAL is neither forwarded to the member nor returned to the printer.)

By certifying a *permanent address,* a military mem-

ber in the States will insure the receipt of his THE JOURNAL MSMS every month and eliminate waste of vital paper during wartime (already cut 10 per cent, with another 10 per cent expected within thirty days).

An APO is considered a permanent address, so members in foreign service need not certify the above information.

MICHIGAN STATE MEDICAL SOCIETY POSTGRADUATE FOUNDATION

The following Resolution was adopted unanimously by the Michigan State Medical Society's House of Delegates at its 77th Annual Session, September 21-22, 1942, in Grand Rapids:

WHEREAS, Michigan is recognized throughout the country as having developed an outstanding program in postgraduate medical education in the country, and

WHEREAS, this excellent program must be expanded to keep pace with improvements in the swiftly-moving science of Medicine, and

WHEREAS, a perpetuation of this program, so beneficial to a continuation of better health of the public, is most desirable, and

WHEREAS, The House of Delegates of the Michigan State Medical Society in September, 1941, ordered the establishment of a Michigan State Medical Society Foundation for Postgraduate Medical Education, and

WHEREAS, after detailed study of this important matter by The Council of the State Society and its Committee on Postgraduate Medical Education, The Council in June, 1942, executed a Trust Agreement, creating the "MICHIGAN STATE MEDICAL SOCIETY FOUNDATION FOR POSTGRADUATE MEDICAL EDUCATION," and appropriated an initial sum equivalent to $10,000 to establish this Foundation, and

WHEREAS, one member of our Society has already provided a substantial sum in his will for the purposes of the Foundation; therefore be it

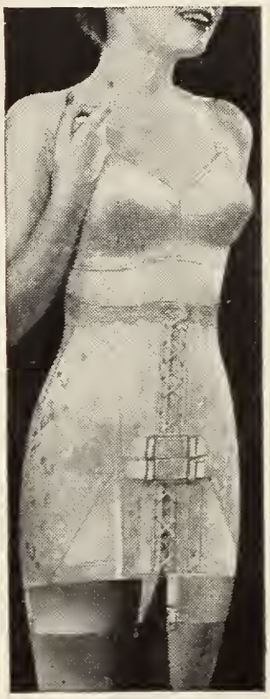
RESOLVED, that all members of our profession and others interested in competent medical service be encouraged to make generous contributions now, as well as in their last testaments, to the "Michigan State Medical Society Foundation for Postgraduate Medical Education," in the interests of Medicine and the public health of this state.

THE INJUSTICE OF JUSTICE

When the Supreme Court of the United States upheld the conviction of the American Medical Association for its opposition to a questionable type of medical service, Themis, the Goddess of Justice, opened her eyes in astonishment. "This Daughter of the Heavens," representing the personification of "that divine law of right which ought to control all human affairs," lost her Olympian poise and longed for the days of the "venerable deities," when with eyes blindfolded, it was relatively safe to let her sword rest in its sheath—and to hold her scales for the accurate balance of justice which was duly meted out.

Leaving justice out of the question, how can the administration reconcile its ambition for better medical

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put back on jobs quickly when you prescribe a SPENCER SUPPORT
as aid to treatment of



Spencer Sacroiliac Support designed for this woman.

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FATIGUE
Due to Overwork

ENTEROPTOSIS
With Symptoms

LOW VITALITY

BACK INJURY

POSTOPERATIVE
Convalescence

WRONG POSTURE
and Symptoms



Spencer Sacroiliac Support designed for this man.

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Please send me booklet, "How Spencer Supports Aid the Doctor's Treatment."

.....M. D.

Address H-4

THE WAYNE UNIVERSITY COLLEGE OF MEDICINE

Annual Alumni Clinic Day

Wednesday, May 12, at 1 P.M.

Horace H. Rackham Educational Memorial Building, Detroit

PROGRAM

1. "Doctors and Drugs on the Civilian Front"

   Frederick F. Yonkman, M.D., Professor of Pharmacology, Wayne University, College of Medicine.

2. "Medical Problems of the War Workers and Their Management in Your Practice"

   John J. Prendergast, M.D., Medical Director, Chrysler Corporation.

3. "Use of the Latest Methods in the Treatment of Burns with Experience Gained from the Boston Night Club Fire"

   Oliver Cope, M.D., Assistant Professor of Surgery, Harvard University, College of Medicine.

4. *Panel Discussion*—"Problems and Recommendations Concerning the Hospitalization of Your Patient."

   Clarence Umphrey, M.D., Interlocutor —General Practice

   John Law, M.D., Hospital Administrator

   Gordon Myers, M.D., Internal Medicine

   Harold Henderson, M.D., Obstetrics

   A. D. LaFerte, M.D., Orthopedic Surgery

   John M. Dorsey, M.D., Psychiatry

   Clark Brooks, M.D., Surgery

5. Banquet—7 P.M.
   "Geo-Political Aspects of American Security."
   Harold E. Stewart, Ph.D., Dept. of Geography, Wayne University.

service with this obstructive attitude toward the best medical service in the history of the world?

If Themis had not deserted the Delphic oracle, we might learn the answer.—Editorial *Journal of the Oklahoma State Medical Association,* February, 1943.

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We do not raise the question as to whether the Court correctly interpreted the law in each case, but apparently the Washington physicians should have organized a union; the union officials then hire a group of plug-uglies; these goons could then have beaten up the physicians who did not conform to union rules and they could have picketed the hospitals and refused to let supplies be taken to them. In all of these activities they would have been immune from Federal prosecution. What reason is there to believe that Washington, where unions have such powerful friends, would be an exception?—*Wall Street Journal.*

GROUP DISABILITY INSURANCE

A survey presented at the County Secretaries' Conference of January 24 indicated that members of most of the larger county societies are already covered by group disability insurance and that only a few of the smaller societies appeared to be interested. The Executive Secretary of the Health and Accident Underwriters' Conference who addressed the January 24 meeting, felt that if the number to be covered was small, the matter should be delayed pending sufficient demand. In view of the lack of numbers at this time, the Executive Committee of The Council felt that action should be postponed.

STATE AID TO MICHIGAN COUNTIES

State Aid in seventy-three Michigan Counties exceeds local property taxes. The operating expenditures of all State Funds for the last fiscal year were:

Function	Fiscal Year Ended June 30, 1942
General government	$10,437,937.09
Education	62,895,739.15
Public health and medical assistance	5,432,098.41
Mental hygiene	9,890,225.62
Public welfare services	43,194,146.17
Public safety, defense and adult corrections	7,654,596.90
Highways	55,551,006.97
Regulatory services	4,875,088.85
Conservation, recreation and agriculture	4,675,077.04
Debt service	6,060,573.75
Expenditures of state enterprises for capital improvements	157,996.44
	$210,824,486.39

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NERVOUS patients are accepted by us for observation and diagnosis as well as treatment.

E. W. STOKES, Medical Director, Established 1904.

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COUNTY AND PERSONAL ACTIVITIES

100 PER CENT CLUB FOR 1943

Barry County—H. S. Wedel, M.D. Secretary
Branch County—James Bailey, M.D., Secretary
Dickinson-Iron County—E. B. Anderson, M.D., Secretary
Lapeer County—H. M. Best, M.D., Secretary
Macomb County—D. Bruce Wiley, M.D., Secy.
Manistee County—C. L. Grant, M.D., Secretary
Mecosta-Osceola-Lake—John A. White, M.D., Secretary
Menominee County—Wm. S. Jones, M.D., Secy.
Midland County—H. H. Gay, M.D., Secretary
Muskegon County—Helen Barnard, M.D., Secy.
Newaygo County—W. H. Barnum, M.D., Secy.
Oceana County—W. Heard, M.D., Secretary
Shiawassee County—I. W. Greene, M.D., Secy.
Sanilac County—E. W. Blanchard, M.D., Secy.
St. Joseph County—R. J. Fortner, M.D., Secy.
Ontonagon County—W. F. Strong, M.D., Secy.

The above county medical societies have certified 1943 dues for every member of their respective societies, to be the first 100 per cent paid-up counties for this year. Michigan State Medical Society dues for 1943 are $12.00.

A membership record was established in 1942 when the total number of Michigan State Medical Society members reached an all-time high of 4,714.

Roster Number—A list of all members of the Michigan State Medical Society will appear in the May number, as in the past.

* * *

The Bulletin of the Ingham County Medical Society, February, 1943 issue, lists all the past-presidents of the Ingham County Medical Society from 1901 to 1942.

* * *

A "conference" is a group of men who individually can do nothing but as a group can meet and decide that nothing can be done.

* * *

The International College of Physicians will hold its Fourth Assembly June 14-15-16 at the Waldorf-Astoria Hotel in New York. The program will be devoted to war surgery and rehabilitation.

* * *

"Notes on the Cost of War" is an interesting article containing facts little known, written by H. E. Randall, M.D., and published in the Bulletin of the Genesee County Medical Society, February 9, 1943.

* * *

"R-sole-ectomy" is the title of an original "scientific" article which appears in the Bulletin of the Kent County Medical Society, February issue. It is an hilarious personal case history of a proctologic patient.

* * *

The Wayne County Medical Society has authorized the mailing of a letter to all its members urging co-

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operation with the Red Cross 1943 War Fund Campaign. William C. Lawrence, M.D., is Chairman of the drive among Detroit's medical men.

* * *

The American College of Chest Surgeons has cancelled its 1943 meeting. The Board of Regents recommends that State and District Chapters of the College arrange to meet jointly with their State and District medical societies.

* * *

Roy C. Perkins, M.D., of Bay City has been appointed as the representative of the Michigan State Medical Society to the Advisory Committee for Vocational Rehabilitation of the State Board of Control for Vocational Education.

* * *

Wm. G. Gamble, M.D., of Bay City has been appointed as Chief of the Emergency Medical Services Division for District No. 5 of the U. S. Citizens Defense Corps of Michigan. Dr. Gamble succeeds F. T. Andrews, M.D., who recently resigned to move to Lansing.

* * *

Harry B. Zemmer, M.D., of Lapeer has been appointed by Governor Harry F. Kelly as a member of the State Hospital Commission.

Congratulations, Dr. Zemmer, and best wishes for full enjoyment and success in your new work for the people of Michigan.

Cover—The statue to Michigan's Civil War Governor, Austin Blair, stands in front of the State Capitol, Lansing. The Capitol building is distinctive at night, because of its illumination by hundreds of incandescent lights. Carl Arksey of Lansing is the artist who made this unusual photograph.

* * *

A testimonial to the 36th General Hospital was given by the *Detroit Medical News,* the bulletin of the Wayne County Medical Society, in its issue of February 22. The 36th was formed in the present war, as well as in the 1918 war, around the Wayne University College of Medicine.

* * *

J. G. Mateer, M.D., James I. Baltz, M.D., D. F. Marion, M.D., and James M. MacMillan, M.D., of Detroit, are authors of an original article which appeared in the JAMA March 6 issue on "Liver Function Tests."

* * *

The American Association of Industrial Physicians and Surgeons, together with the American Industrial Hygiene Association and the National Conference of Governmental Hygienists, will conduct a four-day "War Conference" at Rochester, New York, on May 24-27, 1943. The meeting is open to physicians, surgeons, hygienists, engineers, nurses and executives of industrial plants.

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Sanitarium Hotel Accommodations

Attention is called to the meeting of the American Psychiatric Association in Detroit at the Statler Hotel, May 10 to May 13, 1943.

The program will consist primarily of War Psychiatry as it is related to the war effort. There will be many presentations which will be of interest to all physicians.

Non-members of the association are invited to register and attend as guests.

The importance of Psychiatry is emphasized by the fact that the meeting has received the approval of the National Office of Transportation.

* * *

Proposed Federal Legislation.—HR-1879, introduced by Representative John B. Bennett of Ontonagon, Michigan, proposes an appropriation of $700,000 to construct a Veterans' Hospital for the accommodation of 150 bed patients in the Upper Peninsula of Michigan.

HR-1956, introduced by Representative George Sadowski of Detroit would provide that every person in the military or naval forces of the United States shall be exempt from all taxes imposed by the United States on incomes. The bill is pending in the House Committee on Ways and Means.

* * *

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Mellin's Food Company, Boston, Massachusetts
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Merck & Company, Rahway, New Jersey
Wm. S. Merrell Company, Cincinnati, Ohio
Michigan Medical Book Company, Detroit, Michigan
Michigan Medical Service, Detroit, Michigan
Michigan Hospital Service, Detroit, Michigan

The above ten firms were among the exhibitors at the 1942 MSMS annual meeting in Grand Rapids and helped make possible for your enjoyment one of the outstanding state medical meetings in the country. Remember your friends when you have need of equipment, medical supplies, appliances or service.

* * *

Hospitalization of non-referred patients.—A tendency seems to be developing on the part of some people to come to a hospital for medical care without being referred by a physician. The reason given is that they are unable to locate a physician, or unable to get a physician to make a house call. The feeling among the hospital superintendents is that while some of these persons come to the hospital in good faith, yet there is a great opportunity for a bad situation to develop. "It is possible," says the report of the Cincinnati Hospital Superintendents' Council, "that some people may learn that by coming directly to a hospital, they can receive a service somewhat equivalent to an office call without expense, since most hospitals make no charge unless medications are given, or certain types of hospital equipment used."

* * *

No hospital bed shortage in Detroit.—A large number of unoccupied general acute hospital beds existed in Detroit in November, 1942, according to the report of a joint study committee representing the Health Coun-



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$10,000.00 ACCIDENTAL DEATH $50.00 weekly indemnity, accident and sickness	For $64.00 per year
$15,000.00 ACCIDENTAL DEATH $75.00 weekly indemnity, accident and sickness	For $96.00 per year

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cil of Metropolitan Detroit, the Detroit District Hospital Council, and the Physicians Hospital Relationships Committee of the Wayne County Medical Society. Thirty-two major hospitals, with a bed capacity of 4,982 beds, had an occupancy of 77 per cent during November.

"Stated in another way," says the *Detroit Medical News,* "the daily number of vacant beds during the month was 1,155 or 23 per cent of the total beds. . . . The problem is to relieve the local situation by getting patients into the every fourth bed that is vacant, some 2,000 beds in all, which represents an idle investment in the neighborhood of $10,000,000."

* * *

Food rationing does not affect consumers who need more processed foods because of illness, according to Section 2.5 of Ration Order No. 13, Office of Price Administration, which reads as follows:

"(a) Any consumer whose health requires that he have more processed foods than he can get with War Ration Book Two, may apply for additional points. The application must be made, on OPA Form R-315, by the Consumer himself or by someone acting for him, and may be made in person or by mail. The application can be made only to the board for the place where the consumer lives. He must submit with his application a written statement of a licensed or registered physician or surgeon, showing why he must have more processed foods, the amounts and types he needs during the next two months, and why he cannot use unrationed foods instead.

(b) If the board finds that his health depends upon his getting more processed foods, and that he cannot use or cannot get unrationed foods, it shall issue to him one or more certificates for the number of points necessary to get the additional processed foods he needs during the next two months."

* * *

The two scientific exhibits displayed on the occasion of Michigan's Postgraduate Industrial Medical and Surgical Conference, held in the Rackham Educational Memorial, Detroit, April 8, were exhibited through the courtesy of the American Medical Association Committee on Scientific Exhibits, of which Thomas G. Hull, Ph.D., is Director.

The exhibit on "Industrial Dermatoses," presented in conjunction with the Section on Dermatology and Syphilology of the AMA, consisted of photographs showing various industrial dermatoses.

The exhibit from the Council on Industrial Health, entitled "An Industrial Health Program for a County Medical Society" consisted of posters on panels showing the organization and activities of an industrial health program for a county medical society.

The thanks of the Michigan State Medical Society and its Industrial Health Committee are extended to the American Medical Association and to Doctor Hull for bringing these interesting and instructive exhibits to Michigan.

* * *

What is health insurance?

This term, to advocates of compulsory social insurance, usually means socialized medicine, with or without cash benefits for loss of wages due to sickness.

As an insurance term, health insurance means only

Say you saw it in the Journal of the Michigan State Medical Society

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Designed for the convenience of the general practitioner, and keeping pace with the progress of medicine in every field, this new Hughes is an authoritative guide to the many advances in diagnosis and treatment. Much new material is presented on chemotherapy, vitamin therapy and endocrinotherapy. Various problems relating to the strain and stress of present-day life are considered. Important advances in treatment by sulfonamide compounds are given. Poisoning by war gases, and up-to-date treatment is discussed. The essential facts on diagnosis, etiology, symptoms, treatment, etc., are grouped in convenient paragraphs for reference. Special sections on the skin and on nervous and mental diseases are included.

Revised and Edited by Burgess Gordon, M.D., Jefferson Medical College, Philadelphia.
36 Illus., 791 Pages, $5.75

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cash benefits for loss of wages and expenses due to sickness.

What is the difference between public assistance (charity) and insurance?

Public assistance is a government system of aid for which the recipients pay no tax or premium. This is plain charity, sometimes called public relief. It is oftentimes made a part of a plan of social insurance but should not be confused with the principles of insurance, wherein periodic premium payments are made by those who expect to receive benefits.

Public assistance beneficiaries, because they are unable to pay premiums, always increase the cost of government insurance plans in which they are included. Charity, whether it is labeled "public assistance" or plain "relief," should not be confused with insurance nor disguised as insurance—*Insurance Economics Society of America, Chicago.*

* * *

The MSMS Radio Committee announces a series of medical broadcasts, beginning Wednesday, February 17, 1943, to be presented for twelve weeks over Station WKAR at 3:45 p.m. The material for these broadcasts is developed and presented by Herman H. Riecker, M.D., Ann Arbor, Chairman of the MSMS Committee on Heart and Degenerative Diseases, as follows:

February 17—"Arthritis"
February 24—"The Care of the Heart in Middle Life"
March 3—"Indigestion. Causes and Management"
March 10—"Fatigue"
March 17—"Foods for Stamina"
March 24—"The Allergic Diseases"
March 31—"How Infections are Spread"
April 7—"Tuberculosis"
April 14—"Immunization vs. Disease"
April 21—"The Control of the Body Weight"
April 28—"The Chronic Cough"
May 5—"The Care of the Elderly"

These broadcasts are in addition to the MSMS radio program presented every Wednesday over WJR, 10:30 P.M. The presentations from March 17 to May 5 are:

March 17—Frank Van Schoick, M.D., Chairman MSMS Child Welfare Committee, Jackson. Topic: "Child Welfare and the War."

March 24—Herman H. Riecker, M.D., Ann Arbor. Topic: "The Health of the Industrial Worker."

March 31—Maurice H. Seevers, Professor of Pharmacology, Ann Arbor. Topic: "Drugged Sleep."

April 7—Maj. Dan Bohmer, U. S. Medical Corps, Univ. R.O.T.C. Topic: "The Army Doctor's Job."

April 14—S. W. Donaldson, M.D., Ann Arbor. Topic: "*You* called the Doctor."

April 21—Carl E. Badgley, M.D., Ann Arbor. Topic: "When You Break a Bone."

April 28—Miss Adelia M. Beeuwkes, Instructor in Public Health Nutrition, Ann Arbor. Topic: "Rationed Eating and Health."

May 5—A. C. Curtis, M.D., Ann Arbor. Topic: "My Skin Itches"

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MEDICINE—Two Weeks' Intensive Course starting June 7. One-Month Course in Electrocardiography and Heart Disease starting the first of every month, except August.

FRACTURES AND TRAUMATIC SURGERY—Two Weeks' Intensive Course starting June 14.

GYNECOLOGY—Two Weeks' Intensive Course starting June 28th; Clinical and Diagnostic Courses.

OBSTETRICS—Two Weeks' Intensive Course starting April 19.

OPHTHALMOLOGY—Two Weeks' Intensive Course starting September 13. Course in Refraction Methods starting May 3.

OTOLARYNGOLOGY—Two Weeks' Intensive Course starting September 27.

ROENTGENOLOGY—Courses in X-ray Interpretation, Fluoroscopy, Deep X-ray Therapy every week.

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IN MEMORIAM

Edward J. Carney of Durand was born in 1878 in Watkins Glen, New York, and was graduated from the Rush Medical College of the University of Chicago. He located in Durand where he practiced forty-two years. Doctor Carney took an active part in civic as well as medical life. He was village president years ago and started immunization clinics in Durand long before a County Health Department was organized. Doctor Carney was a past-president of the Shiawassee County Medical Society and at the time of his death was City Health Officer, a post he held for many years. Doctor Carney died on February 16, 1943.

* * *

Leo F. Secrist of Alpena was born in Ohio in 1886 and was graduated from the homeopathic medical school of the University of Michigan in 1912. He became associated with his father, the late W. A. Secrist, M.D., in Alpena. He was president of the Alpena County Medical Society in 1933 and was on the staff of the Alpena General Hospital. Doctor Secrist was dean of Alpena physicians in view of his long practice in that city. He died March 10, 1943.

* * *

COLLABORATION

Collaboration can be of two kinds, it seems. There are Brothers Hitler and Hirohito, with the new brand —"collaboration" of the enslaved at the point of the sword. Since Americans just don't like that type of collaboration, we are in a war about it.

Rather to be preferred is the teamplay which is making possible the development of the newest of man's brain-children, the electron microscope. There was first an Englishman, with basic discoveries regarding electrons; then an Austrian, a Frenchman, two Germans, a Belgian, two Canadians and several Americans have spliced together the contributions of numerous workers. So that today the electron microscope is a reality, and is in use in research laboratories in several nations. Not limited by the wave length of light, this new tool can magnify 50 to 100 times greater than the finest of previous microscopes. And there is one under construction in New York today that will magnify 1 million times.

Already the virus of tobacco mosaic has been identified by the electron microscope; other viruses are under scrutiny as well as the minute morphology of bacteria and the molecular composition of various compounds. Seen on a fluorescent screen certain bacteria are now known to possess very tough body walls, others have flagella-like appendages. Certain organisms under attack by various chemical compounds have been studied, and the hitherto unknown is beginning to unfold like the pages of a child's primer. Erythrocytes appear to be 2 feet in diameter under the screen of this instrument. Is it too much to expect that many, many of the secrets of life and death, sickness and health will be revealed soon? Numerous serious workers believe that science has opened the door to an entirely new and inspiring vista.

The right sort of collaboration has brought us this great new gift. May Hitler's sort soon perish from this earth—there just isn't room for two kinds.—*Southwestern Medicine,* March, 1942.

Say you saw it in the Journal of the Michigan State Medical Society

THE DOCTOR'S LIBRARY

Acknowledgment of all books received will be made in this column and this will be deemed by us as a full compensation of those sending them. A selection will be made for review, as expedient.

ATLAS OF OVARIAN TUMORS. By Gemma Barzilai, M.D., New York City. Preface by Fred S. Stewart, M.D., Pathologist Memorial Hospital for the Treatment of Cancer, New York City. New York: Grune and Stratton, 1943. Price $10.00.

Dr. Barzilai has given us a most excellent volume, useful for pathologists and clinicians, making available studies of the specific tumors of the ovary. It is a systematic and clear presentation of ovarian neoplasms, and classification of many that have so far defied classification. The text is clear, large type, with marginal notes and index. This is interspersed with plates giving, in black and white, photo-micrograms with, on the opposing page, a minute description with diagnosis and references. There are 258 original illustrations, 45 in colors on 58 plates. The pages are large, 8½x11 inches, and are bound by a plastic back allowing each page to lie flat.

This book is complete in every detail. Each section contains definition, history, terminology, microscopic picture, cytology, structure, histogenesis, site of origin, symptomatology, malignancy and treatment as they apply.

HAROFÉ HAIVRI, The Hebrew Medical Journal. New York: December, 1942.

Harofé Haivri is a semi-annual publication, in its fifteenth year. We have received a copy and it is most interesting. It is paged from page 1 at the back to page 222 in front. The journal has a symposium on Peripheral Vascular Diseases, a section on the Talmud and Medicine, one on old Hebrew Medical Manuscripts, also an English section which is a translation of the other articles. The English section reads from left to right, and turns pages to the left, but pages are numbered backward. The Hebrew section reads from right to left and from back to front, but it does read from the top to the bottom of the page. The section on the Talmud is a discussion on dentistry, prostheses, oral pathology and oral hygiene. *Fetar ex ore* is widely referred to in the Talmud "If one does not walk, say four cubits, before falling asleep after a meal, that which he has eaten being undigestible, causes foulness of breath"—(P. Talmud. Shabbot 41, a).

NEW AND NONOFFICIAL REMEDIES, 1942, containing descriptions of the articles which stand accepted by the Council on Pharmacy and Chemistry of the American Medical Association on January 1, 1942. Cloth. Price postpaid, $1.50. Pp. 671—XCVII. Chicago: American Medical Association, 1942.

Perhaps the most important feature of this new volume of New and Nonofficial Remedies is the radical rearrangement it has undergone, which it is believed will make the contents more accessible and therefore more valuable to the physician or other interested

Physical Therapy Has Practical Value

The large scale on which Physical Therapy measures are being used in the armed services indicates the great possibilities of this field of treatment.

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readers. Heretofore, the classification of products has been basically that of chemical relationship—the new arrangement is primarily according to therapeutic use, chemical classification being introduced by means of subheadings. In addition, the typographic style has been changed so as to give greater prominence to the products of individual manufacturers. No valuable feature has been sacrificed. The book still fulfills its function of establishing chemical standards for new and nonofficial preparations which the Council has found to be useful or to give adequate promise of usefulness in the treatment or prevention of disease. Its function as a guide to the most recent advances in therapeutics has been greatly enhanced.

Careful examination of the general discussions under the various headings and subheadings shows that the Council has admirably performed its annual task of keeping the text abreast with the progress of medicine.

INDIGESTION, Its Diagnosis and Management with Special References to Diet. By Martin E. Rehfuss, M.D., Professor of Clinical Medicine, Jefferson Medical College, Philadelphia. Illustrated. Philadelphia and London: W. B. Saunders Company, 1943. Price, $7.00.

Here is a book giving specific information. "The introduction to every medical problem is provided by taking the patient's history." An outline of the simplest initial approach is given, with discussion, then the physical examination, laboratory analyses, x-ray, and gastroscopy. Causes of indigestion are described. Under allergy are given various lists, in order of decreasing frequency, of foods known to give distress to 500 persons, by percentage, from onions 27 per cent to 105 foods 1 per cent or less. Foods are listed causing allergic symptoms, from wheat 211 to a list of 23 reacting once and ten not reacting at all. Chapters are devoted to all types and forms of indigestion: infection, functional disturbance, ulcer, malignancy, biliary, cardiovascular disease and old age, to mention a few. Many prescriptions and procedures for treatment are given in each chapter. Foods and their values, vitamins and their sources, effects of water, calories and the materials of the diet have general and extensive attention. Diet in disease with many suggested menus is a long chapter. We think the book should prove of great practical value.

ENDOSCOPIC PROSTATIC SURGERY. By Roger W. Barnes, M.S., M.D., F.A.C.S., Professor of Clinical Urology, College of Medical Evangelists, Chief of Urology, White Memorial Hospital, Senior Attending Surgeon Los Angeles County Hospital. With 104 illustrations. St. Louis: The C. V. Mosby Company, 1943. Price, $6.00.

Prostatic surgery has undergone revolutionary changes in the past few years, and the endothermic operation merits a book to itself. Dr. Barnes has been a teacher for several years and understands what is necessary for lucid teaching purposes. The history of transurethral surgery is covered in a chapter by Clyde W. Collings, M.D., of Los Angeles. Anatomy, pathology and examination of the patient are well presented, with sufficient illustrations and references. Indications, preoperative care and selection of anesthetic follows. Technical instruction is given on the electric current and

its modification, and on the instruments used, so that the student will understand his tools. Over a hundred pages are devoted to the details of operation with pictures of every sort of procedure. A chapter on punch prostatectomy is included, by H. C. Bumpus, M.D., of Pasadena. It is a very valuable book, 232 pages.

DISEASES OF THE BREAST. By Charles F. Geschickter, M.A., M.D., Lieut. Commander, Medical Corps, United States Naval Reserve, Director of the Francis P. Garvan Cancer Research Laboratory, Baltimore. With a Special Section on Treatment in Collaboration with Murray M. Copeland, A.B., M.D., F.A.C.S., Instructor in Surgery, Johns Hopkins Medical School. 593 illustrations. Philadelphia: J. B. Lippincott Company. 1943. Price, $10.00.

Contributions to the etiology, diagnosis and treatment of mammary diseases in recent years has produced great progress much of which can be attributed to the many classes of specialists interested, surgergy, radiology, obstetrics and gynecology, pathology, endocrinology. The work done in these fields has been brought together in this volume, and placed at the call of the general practitioner and the specialists. Increased importance is being placed on microscopic pathology, and a section is included in each chapter. The book is a comprehensive survey of the subject. Normal development, functional changes, examination and diagnosis, mammary hypertrophy, mastitis, cystic disease, benign fibro-adenoma, cancer, are all carefully and fully studied. Treatment of benign tumors and management of recurrent tumors are given full attention. Throughout the book are one hundred and eighteen tables giving the results of research and a world of information otherwise impossible to find. The book is well written, clear large type, beautifully executed and profusely illustrated. The material is of the latest, and each chapter contains a list of references.

PSYCHOSOMATIC MEDICINE. The Clinical Application of Psychopathology to General Medical Problems. By Edward Weiss, M.D., Professor of Clinical Medicine, Temple University Medical School, Philadelphia; and O. Spurgeon English, M.D., Professor of Psychiatry, Temple University Medical School. Philadelphia and London: W. B. Saunders Company, 1943. Price, $8.00.

"Functional" diseases have been the escape for many conditions where no "organic" disease could be found. Now psychosomatic explanations are offered. Medical practice is divided roughly into thirds. The one includes the so-called "functional" problems, another third of the patients who consult a doctor have symptoms that are in part dependent upon emotional factors. The third group includes disorders generally considered wholly within the realm of physical disease, such as migraine, asthma, and essential hypertension. Psychosomatic medicine is interested in all three to different extents. Not only the physical side of the patient must be studied, but the emotional life may be of utmost importance. The interdependence of the physical and emotional in the cardiovascular system, essential hypertension, is thoroughly discussed and cases in point reported in extensive detail. The gastro-intestinal system, the endocrine system, genito-urinary, respiratory, central nervous systems, and special senses receive like attention. There are several chapters on general principles, problems, and special psychotherapeutic treatment. It is a valuable book on a little understood branch of medicine.

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The art of anatomic illustration entered a new epoch upon the publication of the Tabulae Anatomicae of Giulio Casserio (Venice, 1627). This female figure is one of Casserio's most beautiful copperplates.



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Reading Notices

CHEMOTHERAPY OF MALARIA

"Chemotherapy of Malaria," a review of the biological and statistical background of malaria, and of the literature on antimalarial chemotherapeutic agents, by Dr. James H. Williams, Stamford Research Laboratories, American Cyanamid Company, has just been published by Lederle Laboratories, Inc., New York.

The work is presented in five parts: I. Introduction and Biological Background (pp. 1-27), II. Sulfonamido Compounds and Sulfones as Antimalarials (pp. 28-58), III. Amidines as Antimalarials, (pp. 59-67), IV. Quinoline Compounds (exclusive of the cinchona derivatives) as Antimalarials (pp. 68-189), and V. Acridine Compounds as Antimalarials (pp. 190-273). Each part begins with an itemized Table of Contents, followed by a detailed discussion of individual compounds, with graphic formulas, tables, etc., and concludes with a bibliography of patents and literature references.

The book is 8½x11 inches, bound in heavy blue paper. Any research worker in the malarial field can obtain a copy, without charge, by sending his name, address, position and connections, to Lederle Laboratories, Inc., 30 Rockefeller Plaza, New York, N. Y.

DURING FOOD SHORTAGES

It is well to bear in mind that *dried brewers yeast, weight for weight, is the richest food source of the Vitamin B Complex.* For example, as little as 1 level teaspoon (2.5 Gm.) Mead's Brewers Yeast Powder supplies: 45 per cent of the average adult daily thiamine allowance, 8 per cent of the average adult daily riboflavin allowance, 10 per cent of the average adult daily niacin allowance.

This is in addition to the other factors that occur naturally in yeast such as pyrodoxin, pantothenic acid, etc.

Send for tested wartime recipes, the flavors of which are not affected by the inclusion of Mead's Brewers Yeast Powder. Mead Johnson & Company, Evansville, Indiana.

HORMONE DOSAGE AT A GLANCE

Schering is currently issuing a series of 6x9 inch charts enabling one to tell at a glance the dosage of hormones for various gynecological and endocrine disturbances. The first of these will deal with Dysmenorrhea. At regular intervals, thereafter, charts will be issued on other subjects such as the Male Climacteric and Functional Uterine Bleeding. These charts may well help clarify the maze of seemingly confusing terminology and dosage of endocrine disturbances, and should prove highly useful to practicing physicians.

Physicians may obtain copies of these charts by writing to the Medical Research Division, Schering Corporation, Bloomfield, New Jersey.

NEW G-U ANALGESIC AND ANTISEPTIC

A new analgesic and antiseptic for use in genito-urinary conditions has been added to the line of E. R. Squibb & Sons under the name, "Cajandol." A preparation of 5 per cent oil of cajeput dissolved in peanut oil, with 0.1 per cent propylparahydroxybenzoate as preservative, Cajandol was developed at the Brady Urological Institute, Johns Hopkins Hospital, and has been in use there during the past several years.

Clinical experience has shown that Cajandol alleviates pain and distress due to instrumentation and fulguration. It is also beneficial in many types of acute and chronic cystitis and other pathologic conditions of the bladder.

In treating these conditions, 10 c.c. to 15 c.c. of Cajandol are instilled into the bladder through a catheter at daily or bi-weekly intervals. In a few cases, Cajandol has been injected up the ureter during the use of the Councill stone extractor and has facilitated withdrawal of this instrument when there has been difficulty due to spasm of the ureter.

Cajandol is supplied in one-pint bottles only.

NEW SALESMANAGER APPOINTED

Appointment of Rafael C. Brewster as general salesmanager in charge of sales and advertising for Frederick Stearns and Company is announced by Erwin F. Fauser, president. His appointment, President Fauser said, is in line with Stearns' program of expansion of research and products.

Brewster's wide experience includes sales direction for E. R. Squibb and Son, Lentheric, Inc., House of Westmore, Inc., and Canada Dry Ginger Ale, Inc. He also has been a member of two advertising agencies and of the staff of *Cosmopolitan* Magazine.

DOCTOR GUILD ELECTED PRESIDENT

Election of B. Thurber Guild, M.D., member of the staff of the Massachusetts General Hospital, Boston, as president of Fairchild Brothers and Foster, a subsidiary of Winthrop Chemical Company, was announced recently by Theodore G. Klumpp, M.D., president of the parent company.

Fairchild Brothers and Foster manufacture enzymes and other ethical pharmaceutical products.

Since 1920, Dr. Guild has specialized in internal medicine and the study and treatment of diseases due to allergy; and he has maintained a consultant practice in problems of dermatology complicated by allergy. He is a past president of the Dorchester Medical Society, consultant of the Council of Pharmacy and Chemistry of the American Medical Association, and councilor of the Massachusetts Medical Society. He is a member of the Society for Investigative Dermatology and the Society for the Study of Asthma and Allied Conditions, and is secretary of the Boston Allergy Round Table.

Dr. Guild's researches include a study of skin diseases of small animals conducted at the Angell Animal Hospital, Boston, and of problems of human skin irritations due to soap.

CLINICAL EVALUATION OF "SECONAL SODIUM"

During the course of a year, Dietrich (Anesth. & Analg., 22:28, 1943) attempted to evaluate "Seconal Sodium" (Sodium Propyl-methyl-carbinyl Allyl Barbiturate, Lilly) as a sedative in general pediatric practice. Over 3,700 doses of the drug were administered to more than 500 children and infants, both private and ward patients, without any untoward effects on pulse, temperature, blood pressure, or cerebrospinal fluid pressure. The drug proved to be an excellent general sedative possessed of some analgesic action, and in tetanus and in the performance of certain otherwise painful procedures where a general anesthetic was not desirable, such as pinch grafts, lumbar punctures, myringotomies, and incision and drainage of minor abscesses, it was of particular value.

When the age of the patient and freedom from gastric symptoms permit, "Seconal Sodium" should be

(Continued on Page 332)

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(Continued from Page 330)

given by mouth. When administered by rectum, however, its action is only slightly retarded. The intact capsule may be inserted in the manner of a suppository by first pricking each end of the capsule with a pin; or, where fractional doses are desired, the powder may be suspended in tap water and given by rectum with a small syringe.

Dietrich found that for good sedation in children of average nutrition the following doses were appropriate: one to three months, ¼ to ½ gr. by rectum; three to six months, ½ to ¾ gr. by rectum; six to thirty-six months, ¾ to 1 gr. by rectum; three to eight years, ¾ gr. by mouth or ¾ to 1½ grs. by rectum; eight to fifteen years, ¾ to 1½ grs. by mouth or 1 to 1½ grs. by rectum. For very deep sedation or for light analgesia some increase in dose may be necessary. Any dose in this schedule may be repeated safely once within an hour if the desired result is not obtained, or may be given with impunity every three to four hours if circumstances demand prolonged sedation.

COUNCIL AND COMMITTEE MEETINGS

April 4, 1943—Syphilis Control Committee—Olds Hotel, Lansing.

April 15, 1943—Distribution of Medical Care—Statler, Detroit.

April 15, 1943—Executive Committee of The Council—Statler, Detroit.

April 15, 1943—Mental Hygiene Committee—Ann Arbor.

May 2, 1943—Joint meeting of the Child Welfare Committee and Maternal Health Committee—Olds Hotel, Lansing.

May 19, 1943—Executive Committee of The Council—Statler, Detroit.

COUNTY MEDICAL SOCIETY MEETINGS

Bay—March 24, 1943—Nurses' Home Mercy Hospital—Speaker: Norman Westlund, M.D.
April 28, 1943—Wenonah Hotel—Postgraduate Conference.

Calhoun—April 6, 1943—Hart Hotel—Speakers: Hugh B. Robins, M.D. and W. L. Howard, M.D.—Subject: "The Tuberculosis Problem in Calhoun County."

Dickinson-Iron—April 8, 1943—Benzies Border Bar—Speaker: W. S. Jones, M.D., Subject: "The Eye and The General Practitioner."

Genesee—April 13, 1943—Elks Temple—Speakers: Franklin Top, M.D. and Robert B. Kennedy, M.D., who spoke on "Recent Advances in Immunization Procedures" and "Recent Advances in Obstetrics," respectively.

Gratiot-Isabella-Clare—April 15, 1943—Park Hotel, St. Louis, Michigan—State Representative T. J. Hoxie presented a résumé of the work of the 1943 Michigan Legislature.

The Society adopted the following resolution unanimously:

WHEREAS, the medical profession of the United States is ready to offer constructive leadership in the advancement of medical principles that will further medical service to all of the people, and to preserve, not only the science and art of medicine, but the standards associated with the practice of medicine in America;

NOW, THEREFORE, BE IT RESOLVED, that there be created by the A.M.A. House of Delegates a Committee on Medical Service which shall be composed of the following members: (1) The President of the American Medical Association, ex-officio. (2) The Immediate Past-President of the American Medical Association. (3) The Secretary of the American Medical Association, ex-officio. (4) A member of the Board of Trustees of the American Medical Association, designated and selected by the Board of Trustees. (5) One member of the American Medical Association elected as hereinafter provided from each of the nine geographical subdivisions of the United States.

Kalamazoo—April 20, 1943—Public Library Bldg.—Semi-Annual Extramural Courses—Franklin Top, M.D., spoke on "Recent Advances in Immunization Procedures" and Harold Henderson, M.D., spoke on "Recent Advances in Obstetrics." A panel discussion followed; Subject: "The Diagnostic Significance of Pain"—Participants: Carl G. Heller, M.D., Russell T. Costello, M.D., and Charley J. Smyth, M.D.
April 22, 1943—Public Library Bldg.—Speakers: W. L. Lowrie, M.D., spoke on "The Differential Diagnosis and Management of Hypertension" and Lawrence S. Fallis, M.D., spoke on "The Indications for and the Use of Plasma Transfusions." This was followed by a panel discussion on "The Diagnostic Significance of Pain"—Participants: Doctors Carl G. Heller, Russell T. Costello and Charley J. Smyth.

Kent—April 13, 1943—Browning Hotel—Speakers and Subjects: John L. Law, M.D., "Recent Advances in Immunization Procedures" and Milton Darling, M.D., "Recent Advances in Obstetrics."

Ingham—March 20, 1943—Hotel Olds—Speaker: Reed Nesbit, M.D., who spoke on "Common Diseases of the Prostate."

Ionia-Montcalm—April 8, 1943—Speaker: Norman Westlund, M.D., who spoke on "Emotional Factors in Physical Illness."

Jackson—April 20, 1943—Hotel Hayes Ballroom—Clinical Dialogue—Speakers: Gordon B. Myers, M.D., and John W. Hirshfeld, M.D., Topic: "The Newer Concepts in the Diagnosis and Management of Diseases of the Liver."

Washtenaw—April 13, 1943—Hotel Allenel—Speakers: F. A. Coller, M.D. and C. C. Sturgis, M.D.—Subject: "The Newer Concepts in the Diagnosis and Management of Diseases of the Liver."

Wayne—April 5, 1943—Art Institute—Speaker: Cyrus C. Sturgis, B.S., M.D., Subject: "Some Changes Made in Care of Civilian Patients Due to War Conditions."
April 19, 1943—Art Institute—Speaker: Carl George Heller, M.D.—Subject: "Failure of the Male Gonads With Reference to Therapy of the Male Climacteric and Eunuchoidism."
West Side Medical Society met April 21, 1943—Movie by J. Wyeth and Brother, on "Gastric and Duodenal Ulcer." Questions answered by Doctors F. A. Weiser and W. A. Chipman.

The JOURNAL
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Toxic Effects of Chemotherapy*

By John A. Toomey, M.D.
Cleveland, Ohio



A.B., John Carroll University, 1910; A.M., 1912; LL.B., Cleveland Law School, 1913; M.D., Western Reserve University, 1919. Professor, Clinical Pediatrics and Contagious Diseases, Western Reserve University; Physician-in-Charge, Division of Contagious Diseases, City Hospital; Associate Pediatrist, University Hospitals. Fellow, American College of Physicians, American Academy of Pediatrics, American Public Health Association and member of numerous scientific organizations.

A consideration of the subject of chemotherapy from the standpoint of the acute infectious diseases of childhood; the results of chemotherapy in the various types of meningitis, poliomyelitis, sinusitis, complications of measles, scarlet fever, acute pyelitis, gastrointestinal diseases, pneumonia, acute bacterial endocarditis, streptococcus sore throat, ordinary colds, etc.; and the type of dye to be used will be made. In doing this, it will be pointed out that sulfathiazole and sulfadiazine may be much more dangerous drugs than is ordinarily thought and that while the earlier drugs have greater objective symptoms, the newer ones produce complications that are hidden. These come on suddenly and are more serious than those following the administration of the earlier dyes. Particular reference will be given to the role of the kidney in the use of dyes.

For my contribution to this symposium, I thought it best to consider the toxic effects of the various chemotherapeutic drugs, to stress those conditions for which one should be on guard when using these drugs in acute infections and briefly to review the conditions for which these drugs are indicated.

It must be considered axiomatic that chemotherapy should be used with a great deal of caution; that it should not be used except for some good reason; that it should not be used for every ill that the human race falls heir to; and that the disease for which it is used must be one for which one of the drugs is indicated. Should they be used promiscuously, patients may become sensitized and when at a later date chemotherapy is urgently necessary, we may not be able to use one of these life-saving drugs.

Another axiom must be remembered. Use enough of the selected drug over as brief a period of time as possible and discontinue its use promptly. In short, "get in and get out." It is not a good policy, in private practice at least, to give small amounts of dye over a long period of time; in fact, there are only a few diseases like subacute bacterial endocarditis which may be treated with small amounts and possibly do any good. Such patients must be under constant observation. In any other condition, even including gonorrhea, it is my impression that the results are apparent soon or not at all.

Another axiom may be coined, that is, if the drug does not produce any beneficial effect in the patient within twenty-four to forty-eight hours, it is time to change the therapy.

It must be realized that these drugs are not substitutes for surgery and that frequently better results are obtained if a drug is used in combination with specific antiserums.

Chemotherapy is contra-indicated in the treatment of poliomyelitis and lymphocytic choriomeningitis. There is no evidence that it will effect any virus infection other than inclusion blenorrhea, for which it is nearly specific, and possibly trachoma. Monkeys given chemotherapy and then poliomyelitis virus will develop a more severe form of the disease sooner than those not given any drug. There are reports in the literature wherein diseases like poliomyelitis have been treated with Neoprontosil. This drug has no beneficial effect on this disease.

If an individual has had chemotherapy before you treat him, you must remember that he might

*Read at the Seventy-seventh Annual Meeting of the Michigan State Medical Society, at Grand Rapids, September 23, 1942.

have become sensitized, and subsequent chemotherapy must be given with caution, starting out with small doses; otherwise, you may get a marked reaction.

There are several kinds of chemotherapeutic drugs on the market. Each particular drug is introduced on the basis that it causes fewer reactions, can be given more easily, and is less toxic than some previously introduced drug.

The American Medical Association has never accepted Neoprontosil. However, when other drugs cannot be taken, this drug has been recommended. It has also been recommended for the few conditions where drugs have to be given over a long period of time, and by some of the members of the Mayo Clinic, in gastro-intestinal infections.

Sulfamethylthiazole has been taken off the market because its use was followed by too many neurologic complications.

Promin, although a drug equally as good as sulfanilamide for treating streptococci, has not been pushed by its advocates and is still an experimental product. The recent work with this drug in tuberculous infections of guinea pigs is interesting, but not conclusive.

I need not consider sulfasuxidine because it is too early to draw conclusions about a drug so recently introduced. It is not quite definite yet that this drug is any better than sulfaguanidine. Nor need we pay too much attention to sulfabenamide, penicillin or gramicidin for like reasons.

By exclusion, the remaining drugs are: sulfanilamide, sulfapyridine, sulfathiazole, sulfadiazine and sulfaguanidine. Many physicians abhor the use of sulfanilamide and sulfapyridine and prefer to use sulfathiazole or sulfadiazine. They don't like to use the two former drugs because of the visible reactions and obvious complications. On the contrary, I feel that this is an advantage for if a physician learns to use sulfanilamide intelligently, he knows immediately what dangers he is encountering merely by looking at the patient and by checking the urine. Usually a glance at the patient will suffice. The complications are obvious. The same is true of sulfapyridine, but how different is it with sulfadiazine and sulfathiazole! We are told how these drugs lack toxicity; how they produce no visible side effects. The latter statement is true, but the invisible effects of these drugs which come on insiduously and surreptitiously may far outshadow the severity of any of the reactions which follow the use of sulfanilamide. With sulfanilamide and sulfapyridine, you may get crystallization, perhaps ureliths in the ureters, or perhaps a muddy urine in the pelvis of the kidneys. With sulfathiazole and sulfadiazine, a "frozen kidney" may result, i.e., the tubules will be blocked. They appear as though concrete were poured along the passages. The first inkling you have of anything serious is when the patient may have a convulsion or anorexia or vomiting, the secondary signs of kidney disease.

If these latter drugs are used, the blood-urea-nitrogen level should be taken on the third or fourth day if the patient has been treated massively and on every other day thereafter. This is much more important than even examining the urine because the blood-urea-nitrogen level may be increased, azotemia may develop, and the patient may go into convulsions and a uremic state with scant evidence in the urine of any serious nature—certainly not with the gross blood that you repeatedly see with sulfanilamide and sulfapyridine irritations. These drugs, I feel, are dangerous drugs. You must remember that merely because the patient looks well and feels well, it does not mean that he will continue well.

It is very important that the patient get enough fluid. If he takes enough of this, most of the kidney complications may be averted. The patient receiving massive amounts of the drug should be given at least 2,000 to 3,000 c.c. of fluid a day in one way or another; and there should be some relation between the intake and output.

One need not worry about giving other drugs with sulfanilamide, although it is usually avoided. Certainly, however, there is good reason to give alkalies like sodium bicarbonate.

Slides

With sulfanilamide or sulfapyridine, these lesions of the ureters may be as shown in the slide where the ureter is dilated with ureliths. If you notice that your patient passes a muddy urine and if this muddy debris settles at the bottom of the test tube, investigate the possibilities of latent trouble due to kidney blockage. The next kidney shown here was taken from a monkey which also shows marked dilatation of the ureters secondary to drug therapy. In the next slide, you see the actual size of these stones themselves.

Reactions seen in the next patient shown represent reactions to too much sulfonamide therapy. He had taken over 745 grains in fourteen days. He developed fever and became sensitized.

A second patient had 500 grains of the drug and began to have a slow rising temperature on the seventh day, which did not fall until the eleventh or twelfth day afterwards, an intermittent temperature reaction.

The third patient, a physician, had chronic sinusitus and had taken 330 grains of drug over a period of eight days and was sent into the hospital with a typical scarlatiniform eruption. His temperature went down in three days. On the eighth day, he ingested only five grains of sulfanilamide and within a half hour his temperature had gone from normal to nearly 40° C.—a typical sensitivity reaction, and his subjective discomfort was very severe. Sometimes this sensitivity is not appreciated. One may not be aware that a low grade type of temperature curve may be due to the drug.

The temperature curve in a white female with acute puerperal endometritis swung from 98° F. to over 104° F. daily until the sulfonamides were discontinued. Just as soon as they were started again, the temperature rose.

The anemias caused by sulfonamides are either chronic or acute. Chronic anemia is fairly common. Practically every individual treated with the sulfonamides, especially sulfanilamide, will have some slight degree of hemoglobin decrease. This chronic type of anemia is slow in developing and mild in character; the white blood cells are normal in amount and type, and there is no fever. About 3 per cent of the cases, however, develop fairly severe anemia and the red blood cell count may swing rapidly up and down. There may be a relatively high white blood cell count and some fever.

A complication which is very serious is hepatitis. Here are summaries of the histories of five patients. Their ages were 24, 25, 28, 40 and 41 years and they received 26, 35, 35, 50 and 60 grams of sulfanilamide, respectively. The findings were: an enlarged liver, moderate icterus, 4 plus bile in the urine, an exfoliating dermatitis three times and an ascites once. Fortunately, all but one patient recovered when the drug was stopped.

Next is a three-weeks-old child with pneumococcus meningitis and otitis media. There were 7,000 cells in the spinal fluid, 70 per cent of which were leukocytes. The patient seemed almost moribund at the start of therapy. He weighed only 3,220 grams and yet we gave large amounts of sulfapyridine, at least one gram daily for nine days. The temperature dropped within three or four days; the blood-urea-nitrogen level on the second hospital day was 11.5 and the sulfapyridine level 20 mg. per cent. By the fourth hospital day, there were only 840 cells in the spinal fluid. The next day the blood-urea-nitrogen level was 9.6. The patient refused to eat beginning on the ninth hospital day and the temperature rose. The blood-urea-nitrogen level at that time was 15.4. The urine was bloody and crystals were present, as well as a curious reversal of the leukocyte-lymphocyte ratio of the blood stream, a white blood cell count of 26,000 with a leukocyte count of 16 per cent, lymphocytes 77, the blood-urea-nitrogen level going as high as 23.9 per cent. On the fourth day after the drug was discontinued, the blood-urea-nitrogen started to come down and the leukocyte-lymphocyte ratio began to change. This infant illustrates all of the reactions one would expect to find—anorexia, fever, urinary findings, changes in the blood-urea-nitrogen level and the reversal of the leukocyte-lymphocyte ratio of the blood stream which appear when the ureters become blocked.

The next slide depicts a diffuse maculopapular eruption which may appear as a result of drug sensitivity. When these drugs are given experimentally, they produce skin lesions.

One may get into a dilemma in treating a serious infection. The patient may have an influenzal meningitis that has to be treated over a long period of time and this infection is often associated with relapses. If the patient develops a sensitivity, i.e., a skin rash or obvious blood changes, there is nothing to be done except to change the therapy. If, however, the patient merely develops blockage of the ureters and tubules without signs of any sensitivity and without signs that the drug has caused any damage other than mechanical, the urinary pathways can be cleaned out directly by catheter or indirectly by giving large amounts of water internally or by infusion; after this is done and the temperature has come down, one can start treatment again with the same drug. I have seen the kidneys blocked two or three times when treating influenzal meningitis. Where you have a drug that is efficient, and are treating an individual who has a disease that will kill him unless treated, then one is justified in washing out the kidney and in trying to get rid of the drug, and promptly proceed in giving it again.

If an individual who is taking a certain drug becomes sensitized, the physician is in a predicament. His future course may depend upon the drug just used. If the patient becomes sensitive to sulfanilamide, usually he will not be sensitive to either sulfathiazole or sulfadiazine, and vice versa. But occasionally a patient seems to be group sensitive to the sulfonamide radical itself, or at least he is sensitive to practically all drugs as can be seen from the slide shown.

This slide represents an individual who became sensitive. When first admitted to the hospital in August, he had a sulfathiazole eruption. The drug was discontinued. Later when the temperature became normal, it was started again and he had another marked rise in temperature. It promptly fell when the drug was dropped, only to rise again when the same drug was given a few days later. Two trials of sulfanilamide did not cause any reaction, but small amounts of sulfadiazine and sulfapyridine (0.25 gm.) caused definite reaction.

Complications

Eruptions may be directly due to a toxic effect they produce in the patient, causing a severe erythematous maculopapulated generalized eruption, sometimes bullous in type. This toxic effect is rarely seen and only after large doses; subsequent moderate doses cause no reactions.

A purely allergic effect with urticaria, pruritis, sneezing, dyspnea, et cetera, might result if the patient had a reaction after the first dose of the drug, even with the smallest amount possible. It is stated that in such an instance the drug acts like a haptene. Subsequent doses cause the same effect.

A third and most common type of reaction is the so-called allergo-toxic effect, which follows moderate doses approximately seven to fourteen days after the medicine is first given. This eruption simulates some of the contagious diseases in that it may be either a maculopapular or morbilliform type of eruption, like measles and scarlet fever, a type of eruption which reappears if the drug is again given after the original rash has faded.

It is not clear to me how this drug can cause a direct toxic effect as mentioned previously; nor, have I seen any purely allergic type of reaction. Usually our patients have taken some sulfa drug previously.

The allergo-toxic type of effect is common. Such patients, who have had one of the sulfa drugs and who have previously developed a typical allergo-toxic reaction with all the side effects that go with it, may have an immediate reaction within a very few minutes to a few hours after the subsequent ingestion of a small amount of the same drug.

If the mild toxic effects of the sulfonamides are present, one can continue the use of the drug. One does not worry too much about malaise, vertigo, headache, buzzing of the ears, loss of appetite or even nausea; cyanosis following sulfanilamide is so common that it does not require much comment.

When, however, there are moderately severe toxic effects of the sulfonamides, one has to exercise some vigilance or even reduce the dose, i.e., where there is itching of the skin, abdominal pain, deep cyanosis, persistent vomiting and especially diarrhea.

Naturally, the drug must be discontinued if severe toxic effects or sulfanilamide demonstrate themselves, such as fever, dermatitis, anemia of any kind, leukopenia and jaundice. I am, of course, referring to the leukopenia due to the drug. Patients may have leukopenia, and although they do not necessarily respond to a drug per se, the drug may combat the secondary infection which accompanies these conditions. When the patient exhibits toxic manifestations to any of the sulfonamide drugs, one must stop its use at once, force fluids and transfuse.

Treatment

Many other recommendations have been offered, but none of them are necessary if the three previous admonitions are followed. Such things as pentnucleotides, oxygen, methylene blue, glucose and insulin are used but are unnecessary. The physician who is on the alert never wants to get to the stage where he has to treat a patient for toxicity resulting from the drug. He will observe his patient closely, examine the blood daily after the second or third day, get the blood-urea-nitrogen level after the fourth day and watch the patient for jaundice. I have had good results when I have used a dye carefully where the liver damage has been secondary to scarlet fever infections. We avoid its use in leukopenia due to the drug. I also avoid its use in anemia.

Whenever sulfaguanidine is used for a long period of time, destruction of the resident colon bacillus in the gastro-intestinal tract occurs, as a consequence of which there may be some disturbance of vitamin function. It is felt that if the drug is to be given over a long period of time, it should be accompanied by the use of vitamin B plus vitamin K.

Toxic Factors

We should know something about the early toxic factors of the drug, so that we will be able to recognize toxic factors early. What are these toxic factors? In the gastro-intestinal tract and

its associated organs, one may have nausea, vomiting, hepatitis, stomatitis and diarrhea; in the urinary system, crystals, hematuria, anuria or azotemia; in the central nervous system, there may be mental and neurologic changes with dizziness, psychoses and the sight and hearing may become affected; or reactions in the skin and mucous membranes may occur, such as jaundice, cyanosis, dermatitis, conjunctivitis, purpuric spots, agranulocytic lesions; or blood conditions, such as agranulocytosis, acute hemolytic anemia, mild hemolytic anemia, leukopenia with granulocytopenia or leukocytosis with acute anemia; or general effects, such as fever, acidosis or joint disturbances.

With regard to the individual drugs, one may summarize these toxic conditions. So far as the gastro-intestinal system and accessory organs are concerned, reactions follow the use of sulfanilamide, sulfapyridine and sulfaguanidine. Sulfathiazole and sulfadiazine do not seem to produce many such reactions. In the skin, sulfathiazole is the great offender and perhaps sulfanilamide next. All the other drugs may give reactions. As far as general reactions are concerned, such as fever, sulfanilamide and sulfathiazole are common offenders. Sulfanilamide and sulfapyridine are more apt to cause anemias. In the genito-urinary system, sulfanilamide and sulfapyridine are apt to cause reactions and the formation of stones of the urinary tract, pelvis and kidney. Much more serious than this, in my opinion, is the fact that sulfadiazine and sulfathiazole may cause the formation of a frozen kidney, in which the tubules are blocked. Finally, involvements of the nervous and mental system may follow. They seem more common with the use of sulfanilamide and sulfapyridine.

Certain drugs are recommended for certain conditions; adenitis usually caused by streptococcus—sulfanilamide, sulfathiazole or sulfadiazine is recommended; bacteremia—any one of the drugs, dependent upon the type; dysentery is treated with sulfaguanidine; epidemic sore throats—either sulfathiazole or sulfanilamide. I still treat erysipelas with sulfanilamide. Many physicians have treated kidney infections with sulfathiazole. Lymphogranuloma has been treated with sulfadiazine; mastoiditis and meningitis, depending on the cause, have been treated with any one of the drugs. Sulfathiazole is not used in meningitis. This drug is not absorbed freely into the cerebrospinal circulation, although it has been stated that experimentally the drug is absorbed when there is an infection; osteomyelitis —probably sulfadiazine; otitis media—again most any one of the dyes; pneumonia—sulfapyridine and sulfadiazine, usually sulfathiazole in infants; acute rhinitis of virus etiology is not to be treated; suppurative adenitis—either sulfanilamide, sulfathiazole or sulfadiazine. Specifically, sulfaguanidine acts best in B. coli infections and likewise in dysentery, although there have been some reports of the good effects of sulfathiazole against these organisms. If it were to be used in typhoid, perhaps sulfaguanidine is the one to use. Sulfanilamide is efficacious against B. Welchii; sulfadiazine, Friedlander's bacilli; sulfathiazole, gonococcus; sulfanilamide or sulfadiazine, influenzal meningitis; sulfadiazine or sulfanilamide, meningococcus; sulfapyridine or sulfadiazine, pneumococcus; sulfathiazole or sulfadiazine, staphylococcus; sulfanilamide or sulfadiazine, streptococcus hemolyticus.

It is my personal opinion that we could probably practice medicine with just three dyes—sulfanilamide, sulfadiazine and sulfaguanidine. The probabilities are, however, that pediatricians will insist on using sulfathiazole since they feel that children tolerate it well and do not have marked gastro-intestinal symptoms. I feel that sulfadiazine is just as good. We reserve sulfapyridine for those patients who do not respond to other forms of therapy.

It is felt that if we learn how to use these drugs just mentioned, our patients would receive all of the advantages that can possibly be obtained from any chemotherapeutic drug thus far described in the literature.

MSMS

The local injection of 20 c.c. of novacain will often give dramatic relief in acute subdeltoid bursitis.

* * *

While treating patients having colles fractures, have them place their hand behind the neck twice every hour so as to exercise the shoulder.

* * *

Gout is the most common cause of acute postoperative arthritis.

* * *

The treatment of club feet should be instituted within a few days after birth.

—Eugene W. Secord, M.D., Detroit

Sulfonamide Therapy in General Practice*

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During the past seven years, the value of administering the sulfonamides in the prevention and treatment of a variety of infections has been recognized. To obtain maximum success with these drugs it is necessary to have an understanding of certain principles inherent in this type of chemotherapy. In this discussion emphasis will be placed upon presentation of the following factors responsible for the successful use of sulfanilamide and its derivatives in general practice.

1. Proper Selection of Drug
2. Early Treatment
3. Adequate Dosage
4. Detection of Drug Toxicity
5. Employment of Other Therapeutic Measures

■ The chemical treatment of bacterial disease was reopened with the discovery of the effectiveness of the sulfonamide group of drugs. Numerous clinical studies have established the therapeutic value of the sulfonamides in many types of infections, some of which, until these drugs were introduced, had been almost uniformly fatal. To obtain maximum success with the sulfonamide drugs, it is important to have an understanding of the factors which make for success or failure in the treatment of different types of infection. The purpose of this paper, therefore, is to discuss some of the more important basic principles inherent in this type of chemotherapy. Although no two cases are identical in all their detail, the following discussion of the factors responsible for successful sulfonamide therapy may be applied in general to all types of infections. For the most part, only those drugs which have been accepted as being effective in the control of various bacterial diseases will be considered.

Proper Selection of Drug

The proper selection of drug to be employed in a given infection depends largely upon three factors, namely: (1) the drug must possess maximum antibacterial action against the offending organism; (2) the drug must be capable of reaching the region of the infection in effective concentration, and (3) the drug should be the least toxic and at the same time satisfy the first two criteria.

1. *Antibacterial Activity of the Sulfonamides.*—From clinical trial with these compounds, we have learned that certain bacteria are more sensitive than others to the various members of this group. It is important, therefore, to know which drug is likely to be the most effective against a given infectious agent. A number of sulfonamide drugs have been shown to possess a high degree of antibacterial activity against many kinds of experimental infections, but because of their behavior and toxicity in man, only a few of these compounds are of clinical usefulness. Hence, we will first consider their clinical pharmacological and toxicological properties.

2. *Pharmacology.*—The intelligent use of these drugs demands an understanding of the factors concerned with their absorption by, distribution in, and excretion from, the body. With the exception of sulfanilamide, these compounds are quite insoluble in water, although they attain greater solubility in body fluids. The drug concentration reached locally and in the blood is dependent both on the rate of entry into and the rate of exit from the local area and the circulating blood. The rational basis for the local application of the sulfonamides is the higher concentration obtained locally and, because of the relatively greater solubility of sulfanilamide in wound fluids, its use locally has thus far proved to be the most satisfactory. However, the limited solubility of sulfapyridine, sulfathiazole, and sulfadiazine is partially balanced by the fact that these drugs remain in the wound longer than does sulfanilamide. When administered by mouth, all of these drugs are nearly completely absorbed from the intestinal tract into the blood stream within two to four hours after the ingestion of moderate (3 gm.) doses. After the fourth hour the amount of drug in the circulating blood, with the exception of sulfadiazine, diminishes rapidly. Therefore, in order to attain and maintain adequate blood concentration of these drugs, it is necessary to administer a large initial dose, followed by smaller amounts of the drug at four-hour intervals, day and night. Ob-

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viously, when the drugs are employed parenterally, high blood levels are obtained more rapidly than when they are administered locally or by mouth.

urea in their uniform distribution throughout the body, as, after they pass into the blood stream, they diffuse readily into the various body tissues and fluids. The drug concentration in

TABLE I. TOXIC MANIFESTATIONS OF THE SULFONAMIDES

Reaction	Sulfanilamide	Sulfapyridine	Sulfathiazole	Sulfadiazine
Dizziness	Common	Common	Uncommon	Uncommon
Cyanosis	Common	Common	Uncommon	Uncommon
Nausea, Vomiting	30 per cent	60 per cent	18 per cent	4 per cent
Fever	9 per cent	3 per cent	5 per cent	3 per cent
Dermatitis	2 per cent	2 per cent	4 per cent	1 per cent
Conjunctivitis	Not seen	Not seen	2 per cent	Not seen
Episcleritis	Not seen	Not seen	Not seen	Rare
Psychosis	1 per cent	4 per cent	3 per cent	4 per cent
Hematuria Microscopic	Not seen	10 per cent	8 per cent	3 per cent
Hematuria Gross	Not seen	1 per cent	0.7 per cent	Rare
Renal Calculi	Not seen	0.5 per cent	0.3 per cent	Rare
Anuria	Not seen	0.4 per cent	0.5 per cent	Rare
Neutropenia	1.0 per cent	2 per cent	2 per cent	1.5 per cent
Agranulocytosis	Rare	Rare	Reported	Reported
Acute hemolytic anemia	1.2 per cent	1 per cent	Very rare	Rare
Mild anemia	4 per cent	2 per cent	Uncommon	Uncommon
Hepatitis	Rare	Very rare	Very rare	Not seen
Neuritis	Rare	Very rare	Very rare	Not seen

Following their absorption into the blood stream, the sulfonamides are partially conjugated by the liver into the acetylated or conjugated forms. Since the acetylated derivatives of the sulfonamides are therapeutically inactive, and tend at the same time to be more toxic, a high degree of acetylation is therefore distinctly disadvantageous. In general, approximately 20 per cent of sulfanilamide, 30 per cent of sulfathiazole, and 15 per cent of sulfadiazine appear in the circulating blood as acetylated compounds. Because of the irregular conjugation of sulfapyridine, varying from 10 to 90 per cent, it is impossible to predict the amount of acetylsulfapyridine present, although the average is about 30 per cent of the total drug. Thus, the usefulness of sulfapyridine has been limited because of its irregular and, at times, high degree of acetylation.

The sulfonamides resemble the behavior of tissues varies in relation to its vascularity, so that diffusion into areas of chronic infection, bone and necrotic tissue may be deficient. All of these drugs are present in exudates and transudates in concentrations equal or higher than those found in the blood. With the exception of sulfathiazole, they pass readily into the cerebrospinal fluid in concentrations averaging 50 to 65 per cent of that present in the blood. Because of the relatively low concentration of sulfathiazole attained in the cerebrospinal fluids, about 20 per cent of the blood level, its use in meningeal infections has been limited. The low concentration of sulfathiazole in the spinal fluid is not necessarily of great consequence, as it is the existence of antibacterial concentrations of drug in sub-meningeal tissues, curtailing bacterial invasion, which probably limits the spread of the process as much as the drug in the spinal fluid itself. It is, nevertheless, desirable to have a bac-

TABLE II. SELECTION OF DRUGS

Infection due to	*Drug of Choice*
Pneumococcus	Sulfadiazine
Meningococcus	Sulfadiazine
Bacillus mucosus capsulatus	Sulfadiazine
Streptococcus viridans	Sulfadiazine
Streptococcus hemolyticus	Sulfanilamide or Sulfadiazine
Streptococcus fecalis	Sulfathiazole or Sulfadiazine
Staphylococcus	Sulfathiazole or Sulfadiazine
Gonococcus	Sulfathiazole or Sulfadiazine
Escherichia coli	Sulfathiazole or Sulfadiazine
Bacillus proteus	Sulfathiazole or Sulfadiazine
Aerobacter aerogenes	Sulfathiazole or Sulfadiazine
Bacillus pyocyaneus	Sulfathiazole or Sulfadiazine
Hemophilus influenzæ	Sulfathiazole or Sulfadiazine
Bacillus dysteriæ	Sulfaguanidine or Sulfathiazole

teriostatic concentration of drug in the spinal fluid, and, for this reason, sulfathiazole is not recommended for the treatment of meningitis, although good results have been obtained with its use in such infections. These compounds, with the exception of sulfathiazole, readily penetrate the red blood cells. This is perhaps of clinical importance as far as the development of hemolytic anemia is concerned.

The sulfonamide drugs, regardless of their route of administration, are excreted mostly in the urine, both in free and acetylated form, and, with the exception of sulfadiazine, excretion of a single dose is almost complete within twenty-four hours. Only small quantities are excreted in the tears, breast milk, sweat, saliva, or stools. Their excretion by the kidneys is similar to that of urea, but reabsorption by the tubules occurs to a greater extent, and their elimination is reduced in the presence of kidney damage. However, the clearance of these drugs is definitely increased by an increased rate of flow of urine and this is best obtained by forcing fluids, either by mouth or, if necessary, parenterally. With a decrease in kidney function an increase in drug concentration in the blood occurs, especially of the acetyl fraction. Therefore, should the volume of urine become low, the possibility of stone formation in the urinary tract by precipitation of crystals of the acetyl compounds, except acetylsulfanilamide, is greatly increased. Hence, it is extremely important, in order to facilitate the excretion of the acetyl derivatives by the kidneys, to maintain a urinary output of at least 1200 c.c. daily.

3. *Toxicology.*—In Table I is shown the incidence of the more common toxic manifestations observed in patients receiving the sulfonamides. Although sulfadiazine has not been used as extensively as the other members of this group, there are sufficient data now available which lead us to believe that it is the least toxic of these drugs.

On the basis of the above criteria, the following recommendations regarding the proper selection of drugs in a given infection are made (Table II). No doubt, with the rapid developments of chemotherapy, some of these recommendations will soon be subject to change.

Early Treatment

Experience with these drugs in many kinds of bacterial disease has shown that the length of time that elapses between the onset of the infection and the beginning of sulfonamide therapy represents the most important single controllable factor in the prognosis of the disease. The best results, therefore, with the sulfonamides are obtained when they are administered early in the infection, while the number of bacteria is still limited and the extent of tissue breakdown is at a minimum. Although it is important to make a bacteriological diagnosis in each case, it is usually expedient to start chemotherapy on the basis of the clinical picture alone, without waiting for the laboratory findings. This does not mean, however, that the necessary bacteriological studies are to be neglected, as every effort should be made to determine the causative agent. Not only is this of importance for the proper selection of drugs to be employed, but also in those cases where additional therapeutic measures are necessary, such as the use of specific serum, this knowledge is indispensable.

Adequate Chemotherapy

To obtain maximum therapeutic results with the sulfonamides, it is necessary to administer the drug in such a manner as to attain effective concentration of the drug in the circulating blood and/or at the site of the infection, and to maintain the same until the patient has developed sufficient immunity against the infection to prevent a relapse. Thus, adequate chemotherapy largely depends on: (1) the methods used in administering the drug, and (2) the scheme of dosage employed.

1. *Methods of Administration.*—In general, the oral administration of the sulfonamides has proved to be the most satisfactory method in the

treatment of acute systemic infections. However, in certain instances where a rapid elevation of the blood level of the drug is desired, or where oral medication is impracticable or impossible, it is often necessary to resort to parenteral administration. In such cases, sulfanilamide, because of its relatively higher degree of solubility in water, can be given subcutaneously or intravenously as an 0.8 per cent solution in sterile physiological saline. The best results with sulfanilamide parenterally are obtained with the subcutaneous route, by virtue of a more uniform absorption into the circulating blood. In order to administer sulfapyridine, sulfathiazole, or sulfadiazine parenterally, it is necessary, because of their physical properties, to employ the sodium salt of these drugs. It is advisable to give these compounds intravenously as a 5.0 per cent solution in sterile distilled water. Because of the slower excretion of sulfadiazine, its use by vein has given more satisfactory results than has the sodium salts of sulfapyridine or sulfathiazole. All of these drugs may be used locally and, as mentioned above, sulfanilamide has yielded the best results, as the limited solubility of sulfapyridine, sulfathiazole, and sulfadiazine give rise to lower drug concentration. However, they do have a wider range of action than sulfanilamide and also remain longer in the wound.

2. *Dosage.*—In discussing the dosage of these drugs, it is well to point out several factors which tend to influence the amount of drug that is necessary to obtain the desired therapeutic results. The infecting organism, both as to its susceptibility to the drug and as to the severity and type of lesion which it produces, must be considered. Acute conditions, involving soft tissues, require different dosages than do chronic established infections or urinary tract disturbances. Moreover, certain other factors, such as kidney function, drug absorption, and the state of dehydration all influence the amount of drug found in the blood. It becomes apparent, therefore, that it is impossible to outline a course of sulfonamide therapy which will suit the needs of every patient. However, once drug treatment has been started, it is important to continue the drug until complete clinical cure is obtained. Not infrequently, a fall in temperature proves deceptive, and a spread or recurrence in the infection will occur if treatment is stopped too early. Chemotherapy should be continued until the patient has developed sufficient immunity against the infection to prevent a relapse, although the time required for the development of an immunity varies with individual patients and infections. A safe procedure to follow when in doubt, is to reduce the dose gradually over a period of days and watch the patient carefully for any evidence of recurrent infection. Not infrequently an infectious process will be masked by the action of these drugs and, after chemotherapy has been discontinued, the signs and symptoms of the infection will manifest themselves. Theoretically, all patients treated with the sulfonamides should be followed by frequent estimation of the concentration of the drug in the blood. However, experience with these drugs, with the exception of sulfanilamide, has failed to show any consistent correlation between therapeutic effectiveness and the blood level of free drug. Furthermore, in many instances in which these drugs are used, facilities for determining their concentration in blood will be lacking. Therefore, it seems reasonable for practical purposes to administer the approximate amount of drug which experience indicates will probably be therapeutically effective. In general, the following recommendations on dosage are for the treatment of adults suffering with acute infections requiring full amounts of the drug.

Sulfanilamide.—A blood concentration of free sulfanilamide of 10 mg. per cent will give maximum therapeutic effectiveness in most types of infections susceptible to the drug. Higher concentrations (15 mg. per cent) are indicated in certain instances, such as meningeal infections. In general, adequate blood concentration of free drug can be accomplished by an initial dose of 3 to 5 gm. of sulfanilamide, followed by doses of 1.0 to 1.3 gm. every four hours day and night. The above dose schedule applies also to parenteral administration of sulfanilamide in 0.8 per cent solution by the subcutaneous route, although the rate of absorption by the tissues will influence the number of injections necessary. In general, it is necessary to give the drug every six to eight hours in order to maintain adequate blood levels of free drug. For local use, the amount of drug used will depend largely on the size of the area involved. A conservative dose provides 1 gm. for each 10 square inches of surface involved. When used in closed cavities, no more than 5 gm. should be instilled. At no

time should more than 15 gm. be used locally, because the drug is absorbed rapidly and toxic reactions may develop.

Sulfapyridine and Sulfathiazole.—As mentioned above, the amount of free drug in the blood is of doubtful significance, although a level of above 5 mg. per cent should give maximum results except in certain cases, such as meningitis, where higher levels (10 to 15 mg. per cent) are desirable. The usual dosage by mouth for sulfapyridine and sulfathiazole is an initial dose of 3 to 4 gm. followed by 1 gm. every 4 hours day and night. For intravenous use with the sodium salt of these drugs, the initial dosage is 3 to 4 gm., followed by 2 gm. at 6-hour intervals. The local use of these drugs is the same as with sulfanilamide, but, as noted previously, their relative insolubility probably limits their effectiveness.

Sulfadiazine.—Although we have been unable to determine any definite correlation between the effectiveness of sulfadiazine and the concentration of free drug in the blood, it appears that if a free blood level of 5 to 10 mg. per cent is maintained, satisfactory results may be expected in most types of infection. Usually, this level can be realized by administering an initial 3 to 4 gm. dose of the drug by mouth, followed by 1 gm. every six hours thereafter. It is possible, in most cases, to adhere to this six-hour dose schedule, but occasionally, when a higher blood level of drug is desired, the 1 gm. dose is given at four-hour intervals. Furthermore, because of the behavior of sulfadiazine, the intravenous use of its sodium salt is more easily controlled and it is possible to employ the same dosage as with sodium sulfapyridine and sodium sulfathiazole, but at twelve-hour intervals. Employ sulfadiazine locally as mentioned above with the other drugs. In general, the doses of sulfathiazole and sulfadiazine used to treat urinary infections have been lower than those used to treat other conditions. For most types of infection involving the urinary tract treated with these drugs, urinary concentration of 50 to 200 mg. per 100 c.c. is usually sufficient to sterilize the urine, and such a level can be maintained by administering 2 to 3 gm. daily in divided doses.

Sulfaguanidine.—In addition to the drugs already discussed, there is still another sulfonamide compound, sulfaguanidine, worthy of comment. This drug differs from the other members of the sulfanilamide group, in that it can be given by mouth in such doses that saturation of the intestinal contents occurs without producing levels of the drug in the blood higher than 4 mg. per cent. Because of the antibacterial activity and behavior of sulfaguanidine, it is useful in the treatment of infections mainly or entirely localized in the lumen of the intestine, such as bacillary dysentery. The drug is attended with comparatively few toxic effects, although drug rash, drug fever, conjunctivitis, and crystalluria are observed. The following dosage is employed in cases of bacillary dysentery: An initial dose by mouth, 0.1 gm. per kilo. of body weight, followed by 0.05 gm. per kilo. of body weight every four hours until the number of stools per day is five or less, then 0.05 gm. per kilo. of body weight every eight hours for seventy-two hours. Since practically all of the absorbed drug is excreted by the kidneys, the importance of maintaining an adequate urinary output is obvious. No doubt, sulfaguanidine or some other sulfonamide derivative having similar properties, such as sulfasuxidine, will prove effective in other types of intestinal infections.

Control of Drug Toxicity

As is the case with many other chemotherapeutic agents, the sulfonamides give rise to a variety of toxic manifestations (Table I), and in order to employ these drugs intelligently, one must be familiar with the potential dangers associated with their use. Fortunately, most of these toxic effects are not serious, and, if the patients are closely followed, the more severe reactions may be minimized. Furthermore, the incidence of severe toxicity is increased with their prolonged administration, but, since these compounds exert their maximum therapeutic effect within a comparatively short period of time, the necessity of continuing chemotherapy for longer than ten days is most unusual, except in certain types of infections.

In order to recognize and control these toxic reactions, the employment of certain clinical and laboratory procedures is essential. Skin rashes may occur at any time after the beginning of treatment, especially after the fifth day. In such cases it is best to stop chemotherapy, particularly if exfoliative dermatitis is present, although the drug may be continued with caution, if neces-

sary. Drug fever is most commonly seen five to ten days after treatment has been started, but may occur at any time. Not infrequently it is difficult to determine whether the temperature rise represents a drug reaction or a recrudescence of the infection. Except in complicated cases, the fever of the original infection is usually normal by the third day of treatment and, if the patient is clinically improved, one should suspect a secondary rise in temperature as being due to the drug. Drug fever is often followed by dermatitis, hemolytic anemia, or neutropenia, and if it occurs, treatment should be stopped, unless the risk to the patient of continued infection seems greater than the risk of a severe drug reaction. As a rule, if the fever is due to the drug, it will drop within twenty-four to forty-eight hours, if the drug is discontinued and fluids forced.

With the exception of sulfanilamide, the toxic reactions involving the urinary tracts constitute the most important problem in this type of chemotherapy. The renal complications are due in part, if not entirely, to the presence in the urinary tract of crystals composed of the drugs, especially the acetyl portions. However, the presence of crystalluria alone does not indicate renal involvement, unless it is associated with progressive oliguria, hematuria, azotemia, or loin pain. Not infrequently, microscopic hematuria accompanies infectious diseases, and, unless a progressive number of red blood cells is detected, or other evidence of renal damage is apparent, cautious treatment may be continued, but it should be remembered that hematuria is often a precursor of severe renal insufficiency. Obviously, the appearance of gross hematuria, or any of the above kidney complications, are indications for stopping the drug and, at the same time, fluids should be forced, the urine alkalized, and hypertonic glucose solution administered intravenously to promote diuresis. Occasionally, ureteral catheterization is indicated, but should be employed only after other measures have failed. Since crystalluria from these drugs appears to be less frequent in an alkaline urine, it is advisable to administer alkalis in equal amounts to all patients receiving the sulfonamides, except in certain urinary tract infections, such as those due to the streptococcus fecalis in which an acid urine affords better therapeutic results. However, as mentioned above, the maintenance of a urinary output of at least 1200 c.c. daily constitutes the most important factor in preventing the occurrence of severe renal complications.

Acute hemolytic anemia usually occurs during the first four days of treatment and requires cessation of chemotherapy and transfusion of citrated blood. Mild anemia of the hemolytic type is frequently seen and the drug may be continued, but should the hemoglobin fall below 60 per cent, transfusions are indicated. Depression of the white blood cells may occur at any time, although there have been no cases of agranulocytosis which developed within the first twelve days of treatment. It is best, therefore, to check the blood constituents every two to three days, especially in cases requiring the drug for longer than ten days. Nausea and vomiting are the most frequent toxic reactions from these drugs and should the vomiting become severe, it is advisable to check the serum chlorides.

Contra-indications to Sulfonamide Therapy

Theoretically, the only possible contra-indication to the use of the drugs is a history of a previous sensitivity to sulfanilamide, or one of its derivatives. However, in our experience, there have been a number of instances in which patients have developed toxic reactions to one member of this group of drugs and not to another, although this would not necessarily indicate that the patient would not have experienced an untoward reaction to the original drug. In such cases, with histories of previous sulfonamide toxicity, it has been our practice to administer chemotherapy at once and follow the patient very closely, rather than withhold drug treatment. The presence of anemia, jaundice, acute nephritis, leukopenia, or neutropenia per se does not contra-indicate sulfonamide therapy, as these conditions will usually disappear as the infection is brought under control by adequate chemotherapy. Obviously, if such conditions are present, necessary measures should be taken to detect their further development. We know of no medication or food which cannot be given to patients receiving these drugs.

Employment of Other Therapeutic Measures

Regardless of the proven value of sulfonamide therapy, it is to be remembered that these drugs are not to be employed to the exclusion or neglect of other established therapeutic or supportive measures.

1. *Surgical Removal or Drainage of Primary Focus.*—Clinically, it has been demonstrated that the sulfonamides exert their greatest effectiveness in diffuse lesions characterized by maximal tissue invasion and minimal tissue destruction. The presence of necrotic tissue or pus in a lesion prevents the drugs from acting upon bacteria with the same maximum effect which they exhibit in diffuse, non-suppurating infections. It appears, therefore, that their effectiveness in various conditions is determined chiefly by the situation of the infecting organism and the pathological character of the infected tissue. If bacteria are situated in a relatively poor medium for promoting growth, as blood or urine, the drugs are very effective. However, if the bacteria are situated in tissue medium, rich in products of tissue breakdown, which favors bacterial growth and inhibits sulfonamide action, the drugs seem clinically to accomplish little more than to protect uninvolved tissue. Hence, if tissue necrosis or pus formation is present, as in the case of pneumonia with empyema, meningitis with mastoiditis, or septicemia with osteomyelitis, the sulfonamides are not to be employed as substitutes for surgery, but may be used in hopes of preventing a spread in the infection. It follows, therefore, that the most important single factor in the successful handling of such cases is the location and removal or drainage of the focus of infection by proper surgical procedure. Furthermore, in the treatment of urinary tract infections every effort should be made to eliminate every possible cause of urinary stasis, in order to produce an adequately draining urinary tract, as no treatment is adequate until maximum drainage has been provided.

2. *General Supportive Measures.*—Close attention to, and the employment of appropriate measures for the correction of any disturbances in body fluids, electrolytes, blood constituents, vitamins, etc., constitute important factors in the successful handling of a patient suffering with infection. Furthermore, in cases failing to respond to sulfonamide therapy or those who are unable to tolerate the drug, the use of additional therapeutic agents, such as specific serum, is indicated.

Prophylactic Use of Sulfonamides

The usefulness of the sulfonamides as prophylactic agents is difficult to evaluate, as one cannot be certain that infection has, or would have occurred. However, it seems reasonable that if these drugs are effective in the treatment of certain established infections, they might well be employed prophylactically in the prevention of such infections. Already there has appeared in the literature a number of reports which suggest that these drugs are of value in preventing infection following accidental or surgical insult to the body, such as burns, traumatic wounds, compound fractures, appendectomies, bowel resections, pulmonary lobectomies, nephrectomies, and transurethral prostatic resections. In view of the frequency with which subacute bacterial endocarditis follows the extraction of septic teeth, or the removal of infected tonsils, it seems advisable to give sulfadiazine to all patients with acquired or congenital heart disease in whom these operative procedures are contemplated. Although these drugs are definitely contra-indicated in cases of active rheumatic fever, they may be used to protect against the development of recurrent attacks after the acute stage of the disease has passed. Patients with chronic pulmonary disturbances, such as bronchitis and bronchiectasis, often develop severe pulmonary infection after operation and, in such cases, the drug may be given as a preventive measure. Furthermore, it is well to administer the drug in patients requiring frequent catheterization or cystoscopic examination, in order to minimize the febrile reaction which often follows these procedures.

Comment

The introduction of sulfanilamide and its related compounds into the field of chemotherapy has provided the practicing physician with an efficient weapon which, if properly employed, will result in a high percentage of cures. It is our belief that if the basic considerations discussed in this paper are recognized consistently, that constantly improving results will be obtained with the use of the sulfonamides in general practice. In general, the following represent the cardinal principles of successful sulfonamide therapy:

1. Proper selection of drug
2. Early treatment
3. Adequate chemotherapy
4. Control of drug toxicity
5. Employment of other therapeutic and supportive measures

Early Treatment of Compound Fractures*

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This paper summarizes the current thought concerning the therapy of fresh compound fractures. Its scope was planned to include all pertinent features of the therapy including the transportation of the patient.

The literature on this subject for the past five years was reviewed and the concepts therein found were correlated and presented. The work that has come out of the Spanish Civil War and the European phase of World War II was reviewed in so far as it was available in the American literature.

An effort has been made to evaluate the indications and efficacy of primary closure, internal fixation, débridement, and the Orr-Trueta method. Mention of the therapy and prevention of the complications of Tetanus and Gas Bacillus infections is included.

In summary fourteen points which in the author's opinion constitute a basis for the treatment of all fresh compound fractures are promulgated.

■ THE major problems which present themselves in the treatment of compound fractures are:

1. Transportation of the injured from the point of injury or accident to whatever place the patient will receive care.

2. The cleansing or debridement of the compound wound itself.

3. The treatment of the fracture. The type of reduction and immobilization which will be used.

4. The use of chemical antiseptic or bactericides.

Unfortunately, the initial or primary treatment of the patient with a compound fracture is usually carried out by a lay person at the scene of accident, the policemen on a police ambulance, or the attendant on a private ambulance. Their motives are generally of the best, but their training is nearly routinely poor from a medical standpoint. Their actions seldom indicate that they have ever heard of the axiom, "Splint them where they lie."

Unnecessary handling at the scene of the accident is to be condemned. All patients with suspected compound fractures should be treated as if the fracture exists. They should be splinted in any one of several manners and should be immediately taken to the nearest hospital or the nearest place where adequate medical attention can be administered. Every ambulance owner and every physician who is in a community where he is apt to be called upon to give emergency treatment for compound fractures should have available some type of splint which will be satisfactory for emergency immobilization. The Thomas leg splint and the Jones arm splint are undoubtedly the two most satisfactory appliances for this work. Pillow splints, aluminum posterior molds, and any available piece of wood which can be used to immobilize the joint above and below the fracture will serve if nothing else is available. The important point is that some type of splintage should be applied. No attempt at reduction of the fracture should be made at the scene of injury. An exposed fragment of bone should under no circumstances be reduced back into its soft tissue casing until such time as the soft tissues have been cleaned up and until the end of that bone has been cleaned. All that is accomplished by immediate reduction without cleansing it that whatever soiling there is on the surface of the wound and on the end of the compounded bone is carried into the depths of the wound and the débridement which must be done later is made that much more difficult. Local treatment should consist of splintage of the injured part, application of some type of clean, sterile if possible, dressing over the compound wound, and as rapid and painless transportation as possible to the nearest place where adequate surgical attention may be given to the patient's disability.

As soon as the patient is admitted to a hospital, he should be considered as an acute surgical emergency. This means that all departments in the hospital, i.e., the house staff, surgery, x-ray department, and the attending staff should respond to the patient's needs immediately. This point cannot be too strongly emphasized. The problem as it is generally accepted is that of a patient who has a fracture which will probably heal in three or four months provided the fracture does not become infected. If it becomes infected, the patient may have anywhere from a

*Read at the Blodgett Memorial Hospital Staff Meeting, January 6, 1942.

year to eighteen months' disability. If the fracture is adequately treated in its first six to eight hours, the chances are under modern treatment that it will not become infected. If, however, the first six or eight hours are dissipated in useless wastes of time in transportation, waiting for x-rays, waiting for surgery to set up, or waiting for the attending man to see the patient, then the patient is automatically condemned to a long, disabling convalescence which will necessitate, in all probability, multiple operations to treat the infection of the bone at the fracture site and possibly eventual dysfunction of the extremity as the result of faulty position, poor union, chronic osteomyelitis, or stiffened joints as a result of long immobilization.

Sera

Each patient with a compound fracture should have the usual 1500 unit dose of antitetanic serum. A test dose, either intracutaneous or conjunctival, should be used and the remainder then given either at once or in desensitizing amounts as indicated. There are no adequate means of predetermining the presence or absence of the tetanus bacillus in any wound. Since the results of the use of the serum are known to be adequate and since in civil practice the serum is readily available, there would seem to be no advantage in taking a chance by not giving the serum.

Gas bacillus anti-serum in prophylactic doses is a more debatable procedure. Some authors believe it should be routinely used. Other as competent writers believe it should never be used except in therapeutic doses and then only if a gas infection has developed. Others believe that the serum is of questionable value even in established infections and prefer to use oxygen, multiple incisions, sulfanilamide, and deep x-ray therapy as a treatment. Just which one or groups of methods is the best is difficult to decide. In view of the seriousness of the complication and the possible medico-legal complications if the use of the serum is avoided, it would seem to be logical to combine its prophylactic use in all wounds with soil contamination together with careful clinical watchfulness and more extensive care as indicated by the patient's progress.

Shock

As soon as the patient is admitted, an examination should be made which should include a check on the patient's pulse, blood pressure, respirations, and a neurological examination to determine whether or not there is any evidence of concussion, subdoral hematoma, or frank brain hemorrhage. If the patient is being treated in a hospital where modern laboratory facilities are available, an emergency hematocrit and plasma protein determination should be done. The results from these determinations can be delivered within a very short period of time and they will give the physician a more accurate index of the patient's condition relative to shock than a physical examination can possibly do. If the patient is frankly shocked, then that shock should be treated and it should be treated as an emergency in order that the patient may be given adequate surgical care for the compound wound as soon as possible. Too often we hear the statement, "The patient is in definite shock. Let's put him to bed tonight, treat the shock, and we will treat the fracture and the compound wound in the morning." This is poor surgical care. An effort should be made to combat the shock as rapidly as possible in order that the patient may have the wound débrided within the 6- to 8-hour deadline between contamination and infection. Morphia, warm blankets, shock blocks, whole blood transfusion, plasma, or intravenous fluids should be used immediately. The patient should be watched carefully, blood pressure should be checked, and as soon as he responds to the point where his condition is satisfactory, then the rest of the therapy may be carried out.

The treatment and diagnosis of surgical shock is now an accurate and quite clearly outlined entity. The efficacy of plasma, either whole or dried, and whole blood transfusions has been well established and the use of one or the other of these substances must be kept in mind. In a hospital where modern facilities are available, surgical shock should have adequate treatment. This must include the general measures listed above plus discriminating use of either whole blood or plasma and adrenal cortex extract. Accordingly, each patient who is suspected of being shocked should be routinely typed for possible future transfusion. If no donor is available and a blood bank is also not available, then commercially prepared plasma should be used. This is important because the prompt and efficacious treatment of the shock will permit early débridement and accordingly less infectional complications.

Blood and plasma are mentioned primarily because they are the two best therapeutic measures for shock. Other intravenous fluids may be used, but the permanence of their effects and the speed of their reactions are markedly inferior to either blood or plasma. Scudder and his group recommend adrenal cortex extract as an important and powerful adjunct.

Adequate x-rays are a necessity in civilian practice. Most civilian compound fractures are either street or industrial accidents, and as a result they are a potential medico-legal problem, and, in nearly all cases, are insurance problems. For this reason, if for no other reason, adequate pre-operative x-rays are a necessity. If the patient is not in shock, x-rays may be taken immediately; if the patient is in shock, this should be treated first and then the x-rays may be taken. As soon as this has been accomplished, the patient should be removed to the surgery and under a general anesthetic, cleansing and débridement of the wound, reduction of the fracture, and immobilization of the same should be carried out.

Anesthesia

The patient should have a general anesthetic. This is a debatable point. But in preparing this paper between 55 and 60 articles in the literature of the last three years have been investigated. The majority of men are agreed upon the fact that a general anesthetic is much preferable to a local anesthetic. Some of the articles were written by men who had had war experience either in England or in Spain. These men stressed the use of local anesthetic. They were, however, about the only ones who did suggest the use of local anesthetic in the treatment of compound fractures. The reason they stressed the local anesthetic was that general anesthesia of the type that is available in the civilian hospital was not available to them in their advanced clearing station. Furthermore, they did not have Hawley tables available and once the fractures were reduced and débrided they wished their patient to be as wide awake as possible so that the patient could assist by sitting up or adjusting his position as necessary for the application of the post-reduction plaster-of-Paris cast. Inasmuch as most of us do not have these mechanical problems presenting themselves in our civilian practice, we should use a general anesthetic, and the consensus of opinion in the literature at the present time is in favor of débridement, reduction, and immobilization under general anesthesia.

As soon as the patient is satisfactorily anesthetized, all of the soiled and dirty clothing should be cut away from the affected extremity. The wound should be exposed and it should be covered with a clean, sterile gauze pad. The extremity should be shaved around the sterile gauze pad and then it should be washed, or, if you prefer, scrubbed with tincture of green soap and water. It should be scrubbed for at least ten minutes. Scrub sticks should not be used for this, but preferably the surgeon who is going to do the work should with his gloved hand and large cotton or gauze pledgets vigorously scrub the extremity. It should be constantly irrigated with large quantities of either sterile water or sterile saline. Inasmuch as saline is a physiologic solution, it is probably preferable to distilled water. After the surrounding tissue has been adequately cleansed, the gauze dressing over the wound should be removed and the wound edges themselves should be cleaned up in the same manner as the surrounding skin. After this cleansing has been thoroughly accomplished, the skin is prepared with ether, iodine, and alcohol. Dr. Sumner Kock, Chicago, is a firm believer in the fact that adequate skin preparation with soap and water is all that is necessary. With the preparation accomplished the patient is draped in the usual manner and the débridement is carried out.

Débridement

There is considerable question at the present time as to just what constitutes adequate débridement. By definition, débridement means a removal of all of the dead, dying, and soiled tissues in a compound wound. This, according to the judgment of the attending surgeon, may include anything from a mutilating-type of operation to a very carefully done surgical preparation or cleansing of a compound wound. From the current literature the feeling at the present time is that as little tissue as possible should be removed but that sufficient tissue should be removed so that there is no dead, dying, or soiled tissue left in the wound.

In doing a débridement one must recognize the fact that this débriding procedure is not primarily to clean up the ragged skin edges but is principally to clean out all of the pockets of hemorrhage and devitalized muscle tissue and possible

soiling that exists in the depths of the affected extremity. This is a most important point and one which is nearly routinely overlooked. If we recognize this point and attempt to carry out the procedure which is necessary to do this, then we will always enlarge the compounding wound and most particularly will we enlarge the small puncture compound wound which is formed from within out. Too often in this type of case do we see the wound treated locally with some antiseptic solution, a sterile dressing put on, reduction accomplished, and the leg or arm immobilized in a plaster-of-Paris cast. Because this procedure will occasionally give a satisfactory result without any secondary or complicating infection does not mean that it is a good or satisfactory surgical procedure. All compound fracture wounds regardless of their size should be débrided under general anesthetic. This means that all patients with a compound fracture should have a general anesthetic, that their compounding wound should be enlarged, and that a careful débridement should be done. This is the unanimous opinion of all men writing on the treatment of the early care of compound fractures. They do agree that occasionally a local procedure will be all that is necessary, but the additional trauma to the patient in whom this procedure is not necessary is so insignificant compared to the complication as a result of failing to débride a wound that does need it that there is no excuse for not débriding all compound wounds.

All small fragments of bone which have no periosteal attachments left should be removed. The best plan in the debridement is probably to excise the ragged, torn skin edges first. This does not mean massive excision of skin but rather does it mean that only the ragged edges should be removed, and no more than is necessary of the viable skin. Then working from the skin down to the depths of the wound, all of the contaminated muscle, fascia, and soft tissues should be excised. It is a good plan to have a constant stream of normal saline flowing into the wound from an elevated container all of the time because it helps to wash out the débris from the depths of the wound, and it further helps the operator to differentiate between injured and viable tissues. Bleeding points should be picked up with as small an amount of surrounding tissue as is possible, and the ligature should be 000 or 0000 catgut. Caution should be exercised in the débriding of the muscle. Very often there will be areas of intramuscular hemorrhage which to first examination appear to be areas of marked muscle damage. If the area is only one of simple intramuscular hemorrhage, it does not need débriding and will clear up in a few days without the necessity of removal. In questionable cases elevation of the part will often help in differentiation and the patient will be saved additional surgical trauma. It is definitely established that all buried catgut in compound wounds is a definite foreign body and as little of this should be left in the wound as possible. After the wound has been thoroughly cleaned, the bleeding points picked up and tied off, then the reduction of the fracture should be accomplished.

Closure of Wound

There are two very definite schools of thought concerning closure of the wound. Dr. Winett Orr of the United States and Dr. Jose Trueta of Spain are the two outstanding proponents of nonclosure of the wound. Dr. J. Albert Key of St. Louis has written extensively concerning immediate closure of the compound wound following the débridement. With exceptions, the rest of the authors in the current literature prefer to either leave the wound open or close it primarily depending upon the particular problem that presents itself in any given case. Dr. Orr has for years advocated débridement, reduction of the fracture, packing of the compound wound with vaselinized gauze, and then immobilization of the extremity in a plaster-of-Paris cast, thus allowing the wound to have free drainage and permitting the wound to heal by granulation from its base to the skin surface. This work was given additional impetus by the work of Dr. Jose Trueta during the Spanish Civil War. Dr. Trueta treated several hundred cases of compound fractures with the method propounded by Dr. Orr, and his results, according to his writing, have been most satisfactory. Dr. Philip Wilson from New York Ruptured and Crippled Hospital, who for six or seven months was the Chief Surgeon in the American Hospital at Basingstoke, England, also subscribes to the Orr-Trueta method and states in his most recent writing that most English surgeons who are treating war casualties are very enthusiastic about this particular method. There is no question but

what this method does fulfill all of the physical principles which are paramount in the treatment of infected soft tissue and broken bone. The method, in short, is careful débridement of the wound, adequate reduction of the fracture, packing of the wound wide open with vaselinized gauze, and immobilization of the extremity in a plaster-of-Paris casing. This plaster-of-Paris casing is left on until such a time as the cast becomes so soft due to the absorption of secretion from the wound that it is necessary to change the plaster. All of the plaster-of-Paris cast changings are done under general anesthetic and re-dressing of the wound is carried out under the most aseptic technique. This does give the tissues adequate rest. The tight plaster-of-Paris casing prevents local edema. The vaselinized gauze in the wound provides adequate drainage from the depths of the wound to the surface. The lack of daily dressings cuts down the possibility of cross-contamination in the wound. That cross-contamination occurs was very adequately borne out by the experience in World War I, because at that time all compound fractures were dressed daily. Bacteriological studies on these wounds showed that in the early stages only about 20 per cent of the wounds had streptococcus in them where after daily dressings for a period of two weeks about 85 per cent of the wounds had streptococcus contaminants. Without the necessity of daily dressings the patient's pain and disability are considerably reduced. Muscle spasm is not stimulated by the pain of dressing and there is accordingly less chance of displacement of the fragments. Academically, the Orr technique is a satisfactory method, and in the hands of those who are accustomed to using it, it is giving results which are as good as any other method can give at the present time.

There are some disadvantages to the Orr-Trueta method. The principal disadvantage is that the wound which is being treated as an infected rather than a contaminated wound is completely encased in a plaster-of-Paris cast, and is therefore not under direct vision. It takes a fine degree of surgical judgment to decide from the patient's complaints of pain, burning, and swelling of the extremity, and temperature elevation when plaster-of-Paris casing should be bivalved, the wound examined, or when the plaster-of-Paris cast should be windowed so that the wound can be examined. There is one other serious drawback to the method, and that is that if a case of infected compound fracture is encased in a plaster-of-Paris cast, the diagnosis of a developing gas bacillus infection is very difficult to make. Trueta in his book points out that frequent check-up x-rays taken through the plaster-of-Paris cast will demonstrate the presence of gas bubbles in the tissue and that the diagnosis of gas gangrene may be made in this manner. The soundest clinical sign of an impending gas bacillus infection is an elevation of the pulse out of proportion to the elevation of temperature. With practice, the clinician is able to do a very satisfactory job of diagnosing an undrained pus pocket or impending gas bacillus infection even though the extremity is not under direct vision. In the hands of a man who is only occasionally treating this type of case, this method is rather dangerous because often a flare-up of the pyogenic infection or a developing gas bacillus infection may get sufficient start so that the only treatment that is left is amputation, and any method used in the treatment of compound fractures which leads to amputation is the method that is to be condemned.

The opposed method of treatment of compound fractures is that which requires a meticulous surgical débridement, then primary closure of the wound after reduction of the fracture, and maintenance of reduction either by a plaster-of-Paris cast or some type of traction apparatus. As has been mentioned before, Dr. J. Albert Key of St. Louis is a firm believer in this method. He feels that if a man is going to take care of compound fractures that his surgical judgment and skill should be developed to the point where he can do a satisfactory débridement, and he feels that if the débridement is done in the first six to eight hours and is done in a satisfactory manner that the wound is a sterile wound and under the circumstances will heal satisfactorily, by primary closure. Drs. Jensen, Johnsrud, and Nelson, Minneapolis, Minnesota, published a series of cases in 1939 in which they treated thirty-nine compound fractures and two compound dislocations. These wounds were treated by meticulous surgical débridement, local implantation of sulfanilamide, reduction of the fragments, maintenance of reduction in a plaster-of-Paris cast, and all of the wounds healed by primary intention. This series is pointed out at this time to show there is definite evidence that good débride-

ment will permit primary closure of the wound without serious resulting consequences.

Between the method of Orr and Trueta and the method of primary closure, as suggested by Dr. Key, we have all the variants possible. Some men close some of their wounds by primary suture, some men treat some of the wounds by their own modification of Orr's method, some men do not close any wound tightly but close all wounds loosely with widely spaced interrupted sutures.

In general, most men agree the wound must either be sutured tight primarily, or it must be left wide open and that partial closure or closure around a drain carries with it more serious consequences than either complete closure or leaving the wound completely open. In short, there is no rule of thumb by which we may decide whether compound wounds are to be left open or whether they are to be closed. Dr. E. H. Caldwell in an article in the *Archives of Surgery* makes a very satisfactory statement. "The result of any procedure depends as much on the surgeon and his application as on the merits of the procedure."

A satisfactory working rule would be as follows: If a man is constantly and frequently treating compound fractures, then he may rely upon his own judgment as to whether the wound should be left open or whether it should be closed. It would seem that if he is constantly doing this type of work that his surgical ability and judgment would be developed to the point where he could, on the basis of experience, make a satisfactory decision as regards the treatment of the wound. On the contrary, if the compound fracture is being taken care of by someone who only occasionally does this type of work, then it would be safer to leave all of the wounds open, because the possibilities of serious consequences from a wound that is left wide open are much less than they are from a wound that has initial primary closure.

No wound, under any circumstances, should be closed without adequate débridement. Very often the physician giving First Aid will do a superficial cleansing of the wound and then close it preparatory to sending the case in to the hospital for further attention. Instead of helping the surgeon, who ultimately has the responsibility of care, he has only complicated the whole procedure. Nothing is gained by immediate closure without adequate débridement except that infection is assured.

Before leaving the subject "closure of the wound," it should be stated the primary object of treatment of compound fractures is not a plastic closure of the wound. It is rather a satisfactory functional recovery of the affected extremity. If the physician treating compound fractures will keep this point in his mind, the importance of closure of the wound will be relegated to its proper place in his consideration. It is, of course, very satisfactory to accomplish a primary closure of the wound because the patient is spared a disfiguring scar, surgery for a secondary closure when necessary, and the æsthetic disturbances which are incident to a chronically draining sinus. Any one or all of these things, however, are incidental compared to a septicemia, a fulminating local infection which would necessitate amputation, or a gas bacillus infection. Doctor Orr's work has proved very definitely that wounds which are left open do go on to satisfactory healing. The incidence of osteomyelitis at the point of fracture and the incidence of non-union is not increased by leaving the wound open. It is well to bear all of these facts in mind and make the decision on the basis of the case at hand and individual past experience.

Treatment of the Fracture

According to the original outline the next subject for discussion is, "The treatment of the fracture itself including the type of reduction and the immobilization which should be used." In its entirety this would include a careful discussion of the treatment of all types of fractures. Specifically, we wish to speak of the reduction and the immobilization of early compound fractures. There are primarily two schools of thought concerning this problem. Doctor Clay Murray and his group at Presbyterian in New York represent one school which believes in reduction under direct vision at the time of débridement and immobilization in the reduced position by means of internal fixation. The other school which is represented by various very excellent men believe there is no place for internal fixation in the treatment of early compound fractures. Here again, as in the question of "primary closure of the wound," the decision of which method is to be used must depend to a great, if not in its entire, extent upon the judgment and ability of the surgeon who is treating the case. In the hands of men who can do

careful débridement, who are accustomed to doing bone surgery including open reduction and internal fixation of fractures, internal fixation may be used with relative impunity. The non-electrolytic metals, such as Vitallium, which are now available for internal fixation, act in only a very minimal capacity as a foreign body, and their advantages as regards more accurate reduction and more accurate immobilization far outweigh their disadvantages. Contrarily, in the hands of men who are not accustomed and not equipped to do extensive bone surgery, internal fixation of compound fractures is a very dangerous procedure. It increases the length of time the patient is under the anesthetic inordinately.

There is more shock to the patient, there is more trauma to the tissue, the local resistance is lowered, and as a result of this increased trauma the implied contamination of the wound has an opportunity to become infection. There is no dogmatic statement that can be made concerning whether internal fixation should be used or whether it should be completely disregarded. The problem at hand and the person who is taking care of the case must definitely enter into the decision as to whether internal fixation should be used.

What type of immobilization should the fracture have regardless of whether internal fixation has been used or not? There is a definite unanimity of opinion concerning the fact that a plaster-of-Paris cast should be used wherever possible and that traction, either skin or skeletal, should be avoided whenever their avoidance does not impair the recovery of the patient. Those men who are using skeletal traction of the early immobilization of their fractures are also recommending that patients that are put up in traction should have anterior and posterior gutter plaster-of-Paris casts applied so there is the additional immobilization of the cast during the traction period.

Plaster-of-Paris casts have many advantages over other types of immobilization. They supply equally distributed pressure around the circumference of the affected extremity. This pressure does several things. It tends to reduce the extent of the local edema and swelling. It prevents asymmetrical swelling, and subsequent bowing at the fracture site. It actually rigidly fixes, if properly and extensively enough applied, the joint above and below the fracture, and by virtue of its equally applied compressure effect it maintains a more adequate circulation in the affected extremity. There is no other type of immobilization which will do all of these things, and because of this factor all compound fractures whether treated with or without internal fixation should be immobilized in circular plaster-of-Paris casts if at all possible. The major exception to this rule are fractures of the upper half of the shaft of the femur which are complicated by severe and extensive soft tissue damage. It is often impossible either with or without internal fixation to maintain these fractures in proper alignment and the element of traction is necessary to prevent overriding. In such cases skeletal traction either in a Thomas splint, Hodgen splint, or on a Bohler frame is probably the most satisfactory method of maintaining reduction. When it is possible, anterior and posterior gutter splints of plaster-of-Paris should be applied; and as soon as there is sufficient bony healing to permit maintenance of position in a plaster-of-Paris cast, a double hip spica should be applied with the plaster extending down as far as the knee on the unaffected side.

Metallic Pins

Recently, there has been extensive work done on the incorporation of metallic pins which transfix the fragments and are secondarily incorporated in the plaster. The method has been particularly adapted to use in fractures of both bones of the leg. There is considerable literature on this type of immobilization, and we can say accurately that the consensus of opinion is that if these transfixion pins are put in the fragments far enough away from the compounding area so they do not transfix any of the pockets of soft tissue damage, you can get by without spreading the infection by the insertion of the pin. It is an excellent method of maintaining reduction, and by the use of any one of the several machines which are used to hold these pins in place it makes an ideal method of maintaining reduction and holding the leg immobile while the plaster-of-Paris cast is being removed and while the dressing is being done and a new plaster-of-Paris cast is being applied. This particular method happens to be the method used by Dr. Philip Wilson and his successors at the American Hospital at Basingstoke, England. They are very well satisfied with their results and they go

even farther and use the mechanical machine to accomplish the reduction under fluoroscopic control. Roger Anderson states if transfixion pins are used, four should be inserted—two above and two below the fracture site. It is his contention that the additional trauma of the insertion of four rather than two pins is overcome by the increased immobility which the four pins produce. There are some men who have carried this transfixion pin method a step further and are using transfixion pins to immobilize fractures of the shaft of the femur. This is a much more difficult problem from a surgical standpoint because the positioning of the pins in the femur in order to maintain both the proximal and distal fragments immobile is a much more difficult job. Those men who are using this method are reporting very satisfactory results.

Sulfa Drugs

In starting to discuss the use of chemical antiseptic and bactericides as an adjunct to the treatment of compound fractures, one immediately thinks of the sulfonamide drugs. This is easily understood because in the last few years the sulfonamide derivatives have reached a popularity which very few other chemical compounds have ever attained. This popularity is easily explained because as we understand the drugs at the present time they have a nearly universal application in the treatment of infection. Originally, their use was recommended only in the treatment of pneumonia. Gradually this was enlarged so it included all types of pneumonia, gonorrhea, any systemic sepsis, and more recently has been used for local implantation into infected wounds, osteomyelitic cavities, and very recently used as a topical application for many types of local skin infection, and for the treatment of the acutely burned. Just how to evaluate a drug that is as widely used as the sulfonamide group is a very difficult problem. It has been over-used in many cases. It has been used where the indications were not proper in a very large number of cases. Like all good surgical and medical principles when it is used skillfully in the conditions in which it is indicated, it will do nearly as much for the patient as the detail men would have us believe.

In 1939 in the Minneapolis General Hospital three men, Drs. Jensen, Johnsrud, and Nelson, published a preliminary report of the use of local implantation of sulfanilamide in the treatment of compound fractures. At this time these authors reviewed the figures published by authorities on the treatment of compound fractures as regards the incidence of infection in the compound fractures. Bohler at Vienna reported 8.6 per cent severe wound infections in 127 cases of compound fractures. Bohler quoted 14 per cent for Koch in 213 cases, 8.6 per cent for Ehalt in 127 cases, and 17.3 per cent for Schmidt in 116 cases. Ritter in the United States reported 9 per cent infections, Foster 15.7 per cent, and Poyner with industrial cases treated under ideal conditions reported only 6.3 per cent in 269 cases. Jensen, et al., further pointed out that the cases with which they were dealing were entirely different than those cases with which Poyner was dealing, in that Poyner was treating purely industrial accidents which received expert first aid care at the time of injury and were immediately brought to the hospital without any meddlesome prehospitalization care. In reviewing their own figures in their own hospital on cases that were municipal charges sustaining injury primarily from automobile accidents, they found that in 1932 they had 25.8 per cent infection in 32 compound fractures, and in 1937 they had 27.5 per cent infection in forty compound fractures. They included all cases in which there was a drainage of pus, and did not limit the classification of infection to those cases which developed a frank osteomyelitis. Jensen, et al., further used several methods of treatment and felt that their figures were not improved by any particular type of treatment. Dakinization of the wound resulted, in their hands, in 100 per cent infection. Leaving the wound open after débridement and packing with vaseline gauze and application of a circular cast was again, in their hands, less effective than primary suturing after débridement. Immobilization in plaster with traction, when needed, gave better results than traction alone, and was the method most used. In summary, they report the treatment of thirty-nine compound fractures and two compound dislocations using the following method: Complete meticulous surgical débridement of the wound, manipulation and reduction of the fracture under direct vision at the time of the débridement, immobilization of the reduced fractures in a plaster-of-Paris cast, or in a combination of plaster-of-Paris cast and skeletal traction, if the traction is necessary to main-

tain reduction, local implantation of from five to fifteen grams of sulfanilamide, and primary suture. In those cases in which sulfanilamide was implanted locally in the wound, all of the cases healed by primary intention with no case of secondary infection. A control series, 94 open fractures, treated by the same procedure except the implantation of sulfanilamide, showed 27 per cent infection, seven cases of gas gangrene, and five amputations to control infection.

This work is very sound, the article reporting is well-documented, and their principles of treatment are good. There is no question but that the local implantation of, in this case, sulfanilamide has in this series of cases definitely contributed toward the prevention of infection in compound fractures, and because of this and similar corroborating works the sulfonamids, either sulfanilamide or sulfathiazole, should be implanted in all freshly débrided compound fractures.

Local implantation of sulfanilamide, or any of the sulfonamid derivatives, will not correct the evil of poor surgical technique, poor surgical judgment, or the failure of the attending man to give the case adequate care. This point must be strongly emphasized. The sulfonamid group of drugs are an adjunct and an important one in the treatment of compound fractures, but they are not a panacea. Because they have been used does not mean that the rest of the procedure necessary to treat a compound fracture can be slighted. There is a tendency for all doctors in their enthusiasm for a new and apparently satisfactory method of therapy to depend entirely upon the new method and to forget that there are incumbent in the older methods certain fundamental principles which must be carried over and used in conjunction with any new therapeutic method. There will be a tendency with the increasing use of the sulfonamids for men who are totally unprepared, surgically, to attempt the treatment of compound fractures. Undoubtedy they will get by in many cases because without the use of sulfanilamide 70 to 90 per cent of cases of compound fracture heal without infection. The cases that we are interested in influencing, however, are not the cases which will heal without the use of sulfanilamide but rather the small percentage of cases which, with the combined use of good surgical technique and judgment and local implantation of sulfanilamide, will heal, and heretofore had not healed. In the treatment of compound fractures as in the treatment of all other conditions our object is not to let nature do the work and take the credit for it, but rather is it to assist nature so that we will influence favorably those cases which by past experience nature would not take care of alone.

Other Drugs

World War I gave us the Carrell-Dakin method of treating compound wounds. This method even at the time it was being used was not as widely accepted as it was originally hoped for. At present with the exception of certain isolated institutions the Carrell-Dakin method of irrigation of the wound in compound fractures is not used. Dr. Baer's method of the implantation of maggots in compound wounds in order that the maggots by means of autodigestion would clear up the sloughing material and reduce the degree and incidence of infection is at present in essentially complete disuse. Intravenous mercurochrome was at one time advised in the treatment of systemic infections secondary to compound fractures. At the present time no one uses intravenous mercurochrome. The drug used in this manner has more disadvantages than advantages. The local use of bacteriophage in compound wounds, which was and still is highly recommended by Dr. Fred Albee, has only equivocal advantages. In Dr. Albee's hands and according to his report it is a very advantageous method. There are no reports in the literature covering the last three years concerning the use of this method of treatment of compound fractures.

As regards chemical bactericides and antiseptics in the treatment of compound fractures, we have at the present time only one important group and that is the sulfonamid drugs. Either sulfanilamide or sulfathiazole seems to be satisfactory, and the amounts used vary between five and fifteen grams, depending upon the size of the wound. The local use of the drug should be amplified by oral administration of the drug and maintenance of the patient's blood level at the accustomed height until such time as the possibility of infection in the wound has disappeared. The usual check should be made on blood level, white blood count, and on urinalysis daily in order to be sure the patient is not getting a toxic amount of the drug or is not developing any of the untoward side chain effects that the drug sometimes produces.

Statistics

Before summarizing the information presented concerning the treatment of compound fractures, it will be well to review some figures quoted by Dr. H. Winett Orr in the *Illinois Medical Journal,* July, 1939. He states, "We do not take the compound fracture situation as seriously as we should. For one reason the actual results of our care of patients in these and similar infections is seldom known.

"So many of these patients drift from one surgeon to another, or from one hospital to somewhere else that our statistics seldom give us the correct impression of the real situation."

Orr quotes further from the figures from the military draft in 1917. There were 2,000,000 men examined in the draft, one-fourth of whom were physically unfit for military service. Disability in the lower extremity led to rejection of 40,000 men. Of those rejected 5,500 had malunion following fractures, 7,700 more were rejected because of shortness of the leg, 8,600 were rejected because of loss of the lower extremity. There were, then, 21,800 out of 40,000 rejected because of direct disability due to compound fractures of the lower extremity. Orr continues to quote that the British had a mortality of 60 per cent during 1914-1915 in the treatment of compound fractures of the femur. This was reduced quite considerably after Sir Robert Jones and his associates introduced the use of the Thomas splint and its application to the injured soldier before he was moved. He continues to report that Sir Anthony Bowlby in 1920 reported that of 3,000 patients with compound fractures 17.5 per cent (550) died at the front. One-fourth of this group were treated by amputation. Later, in the base hospital, 300 (10 per cent) more died of secondary complications and after amputation, and 3 per cent more died at the base hospital in England so that the total of this 3,000 series was about 30 per cent. Our own Surgeon General's report in 1926 was of interest in that it showed 5,138 (23 per cent) of all the world war fractures were fractures of the femur. Eight years after the armistice 2,469 (48 per cent) were still more than 50 per cent disabled. 1,122 had been amputated, and shortening of the limb was present in more than 2,000 (about 42 per cent of the cases. These figures are quoted in order to demonstrate the severe mortality and disability secondary to treatment of compound fractures. It is appreciated that any figure quoted from a wartime experience is not comparable to civilian practice experience because the time, equipment, and conditions with which the surgeons work are not comparable in the two experiences. The wartime figures, however, must be used because they are probably the largest single series of cases, and inasmuch as at least the base hospital work was done by competent men, these figures at least indicate generally the results of care.

Before leaving statistics it will be well to review the figures quoted by Dr. Jose Trueta in his book, "Treatment of War Wounds and Fractures." His statistics are based on a total figure of 1,073 cases of open fracture of the limb treated by immediate surgical debridement, reduction of the fracture under direct visualization at the time of debridement, packing of the wound with vaseline gauze, and immobilization of the extremity in a plaster-of-Paris cast with the plaster-of-Paris cast left on until such a time as either the odor or the drainage into the plaster was so severe that change was necessary. Of his total of 1,073 cases he had, in his opinion, 976 good results, 91 (11.8 per cent) bad results, and six deaths. Of the six fatal cases, two were deaths following amputation for gangrene which developed after the conservative treatment had been instituted, one was due to shock when the patient was gravely injured by an aerial bomb, one due to pyemia, one to pulmonary embolus, and one to broncho-pneumonia. This author states that about 20,000 cases received this type of treatment during the Civil War in Spain, but there are not detailed statistics available of this group and he has reported only those cases which were under his direct care and on whom he does have detailed statistics. Here again we are dealing with wartime experience and the statistics must be taken with a grain of salt, because although they were probably very satisfactory under the circumstances that existed, they are probably not comparable to the circumstances or the treatment that would be available in private practice. However, six deaths in a series of 1,073 cases of compound fracture is a very satisfactory figure, and only ninety-one so-called bad results is also a most satisfactory figure. The unfortunate thing about this particular series is that the author does not clearly state how he judged his cases as

to whether their end result was satisfactory or unsatisfactory.

Summary

It was the express purpose of this paper to make a review of the current literature on the early treatment of compound fractures and to present a review of the varieties of treatment which are at present being recommended in the care of compound fractures. Rather than simply summarizing the material presented, an attempt will be made to present an arbitrary method for the handling of all compound fractures based on the material presented. This method would be particularly applicable to the handling of compound fractures in this or similar hospitals where these cases are receiving their care not under the direction of one man and his staff but rather under a diversified group of attending surgeons.

1. All compound fractures should be treated as emergencies at the scene of the accident. They should be splinted, preferably in a Thomas leg splint or a Jones arm splint depending on the extremity involved. No exposed ends of bone should be reduced back into the wound until such a time as there has been careful surgical cleansing of both the wound and the exposed bone. Aside from splinting the only treatment that should be administered at the scene of accident is covering of the wound with clean, sterile if possible, dressing, and application of a tourniquet if it is indicated for the control of hemorrhage. In this respect every effort should be made by the physicians in their respective communities to not only prepare themselves to give this kind of emergency treatment if they are called upon for it, but they should also discharge their responsibility to the community by making every effort possible to teach the lay people, gas station attendants, ambulance drivers, policemen, and state policemen the essentials of this emergency treatment.

2. The patient should be treated as an emergency as soon as he is admitted to the hospital for care. All the departments in the hospital including the x-ray department, the resident staff, surgical department, and the attending staff should be willing to give this type of patient preference over any other type of patient which may be utilizing the departments in question at any time.

3. The patient with a compound fracture should have an adequate neurological and medical examination before any therapy is carried out in order to determine two things: (1) Whether or not the patient has a well-developed shock, or whether they are bordering on shock. If the shock has developed, this can be ascertained by clinical examination including direct observation for the cold, sweating extremities, pallor, and breathlessness, and further by blood pressure, and pulse readings. Those cases bordering on shock may be picked up most accurately by hematocrit and plasma protein determination. (2) An adequate neurological examination in order to determine whether or not the patient has a possible brain injury in order that this may be taken into consideration in outlining the further care.

4. If shock or borderline shock is present, shock therapy should be instituted. This is to include bed rest with immobilization of the fractured extremity in a splint, heat by means of warm blankets or hot water bottles, morphia to control the pain, intravenous fluids, small blood transfusion or human plasma preferably, glucose and saline 5 per cent if the other is not available, and adrenal cortex extract to further fortify the shock therapy. This is to be an active therapy, the purpose of which is to get the patient out of the shock condition as rapidly as possible in order that the compound fracture may be cared for within the six to eight hours deadline between contamination and infection of the compound wound. All other treatment in the case of the shocked patient should be held in abeyance until such a time as the condition of the shock has been adequately cared for.

5. Adequate pre-operative x-rays. This is most important particularly in civilian practice and is something, when general hospital facilities are available, that should never be overlooked.

6. The administration of 1500 units of antitetanic serum in all cases of compound fractures and the use of a prophylactic dose of the mixed gas bacillus infection serum in all cases where there is any definite or questionable soil contamination of the wound.

7. Meticulous surgical debridement of the wound under general anesthetic with careful attention to the removal of devitalized, injured, and soiled soft tissue in the affected extremity. This will require enlarging the compound wound so that the major portion of the extremity is under direct visualization and so that all pockets of devitalized tissue are opened up and thoroughly cleansed. The question of whether the wound

should be closed by primary suture or whether it should be treated as an open wound should be carefully considered by the attending man, and in those cases in which there is any question the wound should be left open and packed with vaseline gauze. No wound should be partially closed or closed around a drain; they should either be completely closed or they should be left wide open. It is impossible to be arbitrary about this particular part of the treatment, and it will be necessary to leave this to the judgment of the men attending the particular case in question.

8. All early compound fractures should be packed with between 5 and 15 grams of either sulfanilamide or sulfathiazole; the amount should depend on the size of the wound and the age of the patient. Either sulfanilamide or sulfathiazole by mouth should be administered in the accustomed doses to the patient postoperatively, until such a time as there is no question of any developing infection.

9. Reduction of the fracture should be obtained under direct vision. Internal fixation may be used if in the opinion of the attending man it will insure better immobilization of the fracture and eliminate the necessity of the application of traction in order to maintain satisfactory reduction of the fracture.

10. All early compound fractures after debridement and reduction should be immobilized when possible in a circular plaster-of-Paris cast, and the use of skeletal or skin traction should be avoided unless it is absolutely impossible to maintain satisfactory reduction without traction. Transfixion pins may be used as indicated.

11. Those cases that are being left open and packed with vaseline gauze and that are being reduced and immobilized in plaster-of-Paris casts, should not have a window cut in the plaster over the compound area because this will nearly routinely produce bowing at the fracture site with the subsequent loss of re-duction.

12. Adequate postoperative x-rays must be taken in order to be sure that satisfactory position is being maintained. The first postoperative x-ray should be taken as soon as the patient's condition will permit in order to be sure that during the application of the plaster-of-Paris cast no position was lost. Another x-ray should follow in a period of five to seven days to be sure there has been no change following the gradual reduction of the swelling of the extremity. If the position is still good at this time, then further x-rays may be done at the will of the attending physician. Adequate x-ray examination during the postoperative period will also help to pick up a developing gas bacillus infection in those cases encased in a plaster-of-Paris cast because the x-ray will show any gas that may develop in the tissues.

13. These patients postoperatively must be watched very carefully from a clinical standpoint. The circulation of the toes, adequate elevation of the affected extremity, the patient's temperature and pulse chart with particular reference to whether or not the pulse is running in accordance with the temperature are important. As has been mentioned, one of the most satisfactory clinical criteria for diagnosing early gas bacillus infection is a rapid pulse out of proportion to the patient's temperature.

14. Inasmuch as in civilian practice most compound fractures are either street or industrial accidents, and therefore potential medico-legal cases, adequate pre- and postoperative notations by the surgeon should be made concerning the patient's condition, the location of the fracture, the extent of the compound wound, and also and very particularly the presence or absence of motor or sensory lesion not only in the affected extremity but in other extremities.

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Prolonged Labor*

Analysis of 206 Maternal Mortalities Associated with Prolonged Labor

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The occurrence of prolonged labor connotes some abnormal condition in either powers, passages or passenger. The incidence of, and etiological factors in prolonged labor in three hospitals have been analyzed. The incidence varies. The factors have been analyzed. Treatment has been reviewed. The circumstances surrounding 206 maternal deaths associated with prolonged labor occurring in Philadelphia in the past eleven years have been analyzed. Observations have been on the causes of death and method of handling these 206 cases.

■ The act of childbirth is concerned with the relationship of three factors, the passages, the passenger, and the powers of expulsion. In a normal labor the expulsive forces hold a balance of power over the resistance of the birth canal to the descent and delivery of the fetus. Under ordinary circumstances the mechanism of labor in the primigravida is completed in approximately eighteen hours, in multipara in from eight to twelve hours. Variations of considerable degree either way may be noted, generally with favorable results. Where the labor tends to be longer than usual some abnormal condition of one or more of the three factors concerned will be found present. The abnormality may be slight or labor may be prolonged to a point where mother or fetus, or both, face danger. In some instances the labor may be obstructed without the attendant realizing the fact or its basic cause.

For the latter reason obligatory consultations in hospital practice for labors protracted beyond a fixed time have been suggested by various maternal welfare groups. In general a limit of twenty-four hours is permitted before such required consultation, but many individual hospitals have set a shorter period of eighteen hours.

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TABLE I. PERCENTAGE CAUSES OF PROLONGED LABOR AMONG 6000 DELIVERIES IN THREE HOSPITALS

Contracted pelvis	12.5 per cent
Errors in rotation and flexion	39 per cent
Large baby (breech, twins)	13 per cent
Inertia uteri (soft parts)	26.5 per cent
Toxemia	3 per cent
Other obstetric and medical complications	6 per cent

It is apparent that a labor longer than twenty-four hours is widely regarded as evidence that some abnormality of the mechanism of labor may be present. It is essential to determine that a normal or physiological prolongation, as in occiput posterior in a primigravida may not be confused with a pathological prolongation, as in a contracted pelvis.

To determine the incidence of labors prolonged over twenty-four hours the histories for 6,000 labors consecutively prior to January 1, 1942, in hospitals with which I am connected were examined. This showed an average of 4.7 per cent of the labors lasted over twenty-four hours; approximately one in every twenty. It was difficult to regard racial factors as playing a part and it was not felt that sedation, used in about one-third or less of the private patients was of marked influence. Huber recorded the incidence of prolonged labor, twenty-five hours or over, at the Chicago Lying-In Hospital as 6.3 per cent, Cosgrove noted an incidence of 5.9 per cent in the Margaret Hague Hospital. An analysis of prolonged labors in this series of 6,000 consecutive deliveries showed the basic cause for the delay as follows:

In thirty cases, just under 10 per cent of the series, more than one basic cause was present. The histories were regarded thoughtfully from the obstetric standpoint and it was felt the basic cause had been put down without bias. A larger sampling than 6,000 labors might have changed the proportions of the items. (Table I.)

In contrast to this group, in which the maternal, fetal, and neonatal mortality were minimal, a series of 206 cases in which the labor lasted over twenty-four hours was obtained from the files of the Committee on Maternal Welfare of the Philadelphia County Medical Society for the years 1931 to 1941, inclusive. Each case represented a maternal death.

During this period of eleven years, in Philadelphia, 20 per cent of all deaths in women over twenty-eight weeks pregnant occurred in cases where the labor was prolonged over twenty-four hours. If a condition which occurs once in twenty labors is present so frequently in truly obstetric deaths, one in five, its basic causes, and their prompt recognition and proper treatment is worthy of our serious consideration. The incidence of basic causes in the 206 fatal cases is shown. Eight per cent showed more than one basic cause. Forty-eight of the women were colored; this race constituted one-third of the contracted pelvis group. (Tables II and III.)

TABLE II. PERCENTAGES OF CAUSES OF PROLONGED LABOR IN 206 PATIENTS WHO DIED

Contracted pelvis	21.8 per cent
Errors in rotation and flexion	21.3 per cent
Large baby (breech, twins, et cetera)	18.5 per cent
Inertia uteri (soft parts)	21.3 per cent
Toxemia	10.7 per cent
Other obstetrical and medical conditions	6.3 per cent

TABLE III. CAUSES OF PROLONGED LABOR IN SIXTY MULTIPARAS

Contracted pelvis	7
Errors in rotation and flexion	11
Large baby (breech, twins, et cetera)	17
Inertia uteri (soft parts)	12
Toxemia	7
Other causes	6

Average length of labor in multiparas was forty-nine hours.

Parity was expressed as follows: first pregnancy, 146; second pregnancy, 22; third to fifth, 20; sixth to eighth, 9; over eighth, 9.

Race was divided as follows: White women, 158; colored women, 48.

The age groups were divided as follows: under twenty years, 23; twenty to twenty-five years, 36; twenty-five to thirty years, 66; thirty to thirty-five years, 44; thirty-five to forty years, 27; over forty, 10.

Cause of Death

While some of the differences between these sets of basic causes are striking, one hesitates to draw inferences because of the chances of error involved in such small samples. (Table IV.)

An analysis of the causes of death by a critical survey of the histories leads to this information. (Table V.)

Incorrect certification of death was frequently noted in the early years of the study from which this material was drawn. The diagnosis concurred by the Committee under such circumstances is used here. Every other woman in the

TABLE IV. CONTRAST OF BASIC CAUSES OF PROLONGED LABOR.

	Percentage Hospital Series	Percentage Fatal Cases
Contracted pelvis	12.5	21.8
Errors in flexion and rotation	39	21.3
Large baby	13	18.5
Inertia uteri	26.5	21.3
Toxemia	3	10.7
Other obstetrical and medical complications	6	6.3

TABLE V. PERCENTAGES OF CAUSES OF DEATH IN 206 FATAL CASES OF PROLONGED LABOR

Sepsis	50%
Shock	25%
Hemorrhage	13%
Toxemia	5%
Other obstetrical and medical causes	7%

TABLE VI. DURATION OF LABOR IN 206 FATAL CASES, ASSOCIATED WITH PROLONGED LABOR

Over 20 hours, less than 30	47
Over 30 hours, less than 36	27
Over 36 hours, less than 48	43
Over 48 hours, less than 60	42
Over 60 hours, less than 96	26
Over 96 hours	19
Average	48 hours
Longest	8 days

series died of sepsis. Every fourth woman died of shock. Approximately every eighth woman died of hemorrhage. The average duration of these 206 labors was just under forty-eight hours. (Table VI.)

Contracted Pelvis

Contracted pelvis was the basic cause in prolonging the labor in forty-five cases (21.8 per cent) in this series; in seven of the sixty multiparas. The average duration of the labors in this group was forty-seven hours. One-third of these women were colored. (Table VII.)

The mechanism of normal labor is disturbed when shortened pelvic diameters impede the engagement or advance of the presenting part.

The question of labor in contracted pelvis hinges upon whether disproportion exists at term, whether it is absolute, requiring abdominal delivery; moderate with some risk to the fetus through pressure effects or operative trauma in vaginal delivery; or minimal when but little danger may be expected for either mother or child.

TABLE VII. METHODS OF DELIVERY AND CAUSES OF DEATH IN PROLONGED LABOR DUE TO CONTRACTED PELVIS
Forty-five Cases

	No.	Sepsis	Shock	Hemorrhage	Other
Classical section	22	19	3		
Cervical section	12	7	3	1	1
Porro section	1		1		
Forceps	4	3		1	
Craniotomy	2	1	1		
Version	1	1			
Spontaneous delivery	1	1			
Undelivered	2		1		1
Multiple operations	14	7	6	1	

A careful study of every woman during the prenatal period should enable one to determine if vaginal delivery is likely or doubtful. Roentgen studies should be made where such clinical examinations as Leopold's fourth maneuver, Perret's test, or Hillis' impression method suggest that engagement of the head in the brim apparently is not possible. By such tests and competent consultations one may form a fairly definite idea as to the probability of vaginal delivery and be forwarned of altered mechanisms which may develop or the complications which may arise.

The question of test of labor arises frequently in cases of so-called borderline contraction of the pelvis or borderline cephalopelvic disproportion. It is hard to define the term "test of labor." A working rule might be that with a suspicious relationship of the head and pelvis, eight hours active labor pains less than five minutes apart and of good quality should be allowed. The hoped for effect of the uterine contractions should not be obscured by the use of analgesic agents. If at the end of this period engagement and some descent, determined by rectal examination, have not occurred, abdominal delivery is indicated.

Borderline cases of contracted pelvis will often permit successful forceps delivery of a living child, if effective uterine contractions have moulded the head to accommodate the shortened pelvic diameters. It may be elected in some situations to allow a prolongation of labor if progress, though slow, is evident. The adaptation of the head to the particular type of pelvis should be borne in mind, for the delivery of the head with occiput posterior may at times be more favorable in oval type of pelvis. The danger of trauma of forceps delivery in opening up avenues of entrance for potentially present infection in prolonged labor should be borne in mind.

The obstetric history of the multipara should disclose previous difficult vaginal delivery, often with stillbirth, sufficiently early to avoid the complication and danger of a prolonged labor from contracted pelvis in a succeeding pregnancy. Several cases in the contracted pelvis group gave not only this history but, in addition, showed those physical characteristics described by Horner which have been labelled the dystrophia dystocia group. These short, thick-set women with masculine habitus and distribution of hair, and who frequently show other evidence of glandular dysfunction, especially the hypothyroid type, should always be suspected of developing abnormal labors in their funnel pelves.

If the condition is first met in labor, particularly, if the membranes are ruptured, no vaginal examinations should be made and rectal examinations should be limited. For the operator meeting such a case late in labor with long ruptured membranes and previous vaginal examinations with elevation of temperature and pulse, the viability of the fetus and a critical scrutiny of the situation will guide the selection of operation.

Waters Operation

In the potentially infected case, the low cervical or extraperitoneal (Waters) operation, may be chosen, in the actually infected case the choice lies between extraperitoneal (Waters) operation, the Porro operation, and craniotomy on a living child; this latter operation while one abhors its performance, must in some instances be of choice. Much depends on the skill as well as on the judgment of the operator. Intra-uterine infection may develop so rapidly after rupture of the membranes that early consultation should be asked for in this situation if any suspicion of contracted pelvis exists.

The danger of transperitoneal operation in prolonged and obstructed labor from contracted pelvis is strongly pointed to in the 19 deaths from sepsis in the 22 classical cesarean sections.

That seven of twelve women, on whom low cervical sections were performed in this group, died of sepsis is indicative of the limitations of this operation. It is no panacea against infection, and its choice must always be weighed against the Porro operation if infection is present. The sulfa group of drugs may be added after low cervical section, but they, too, sometimes fail to carry the case through successfully.

In both instances where craniotomy was used as the operation to deliver other methods had failed. Version was the operation of delivery in but one case in this series, high forceps had failed. The patient admitted to the hospital after a home labor of 60 hours was a 215-pound negress who gave a history of several previous stillbirths and two high forceps deliveries, of living children, one child survived, the other was an early neonatal death. Here the fetus was dead and the choice of version over craniotomy subjected the woman to the danger of rupture of the uterus as well as to infection from which she died shortly.

Obese Women

Matthews has stressed the bad prognosis of pregnancy and labor for the obese woman. Particularly, should this fact be borne in mind where contracted pelvis enters the picture. Such cases demand exacting study and the best obstetric judgment available. In the same category I regard the woman with a borderline pelvis who has produced a living child, and does not become pregnant again for a long term of years. In both the obese woman and such elderly secundigravida I look on borderline disproportion as an indication for elective cesarean section near term.

The question of operating on a case long in labor with a contracted pelvis calls into consideration both preparation and anesthesia. If the woman shows signs of becoming exhausted, rising pulse rate and fever, operation should be postponed until a period of rest has been obtained by morphine. During this time acidosis may be combated with infusions of dextrose and the patient's resistance increased by infusions of plasma or blood transfusions. If infection is potential or present, a sulfa drug may be adminis-

tered by injection as a prophylactic measure. Its local and oral use should be the rule following any intra or extra-peritoneal operative delivery after prolonged labor particularly if the membranes have been long ruptured or vaginal examination made.

No patient should be operated upon if her condition is such that the added shock of the operation will throw the balance of the scales against her. Delay here is fully justified if measures are instituted to overcome shock from exhaustion. The tendency of the uterus to fail to retract and contract after prolonged and ineffectual labor should be borne in mind. The tired muscle does not respond well to oxytocics even when they are administered intravenously. Packing should be available, and used on the slightest suspicion that the uterus will not contract. Postoperatively, blood transfusions or plasma infusions should be the rule.

Anesthesia

The question of anesthesia in this group of cases is important. Nitrous oxide anesthesia was believed to have added to the patient's burden in a number of the cases reported. Open drop ether is regarded as much less unfavorable than other types of anesthesia. In several of the cases barbiturate sedation had been used and was regarded, on analysis of the cases, as having contributed to the physical depression which culminated in fatal shock during or after operative delivery.

The subject of contracted pelvis causing prolonged labor with fatal result cannot be concluded without mentioning multiple operations for delivery. There were fourteen such cases. They reflected largely obstetric inexperience and incompetence.

Occipito-posterior or transverse position or other errors of flexion or rotation, such as brow and face, were the basic causes in prolonging labor in forty-four cases (21.3 per cent) in this series; eleven of the sixty multiparas. The average duration of these labors was fifty hours. (Table VIII.)

Errors in rotation and in flexion, usually associated, are common causes of prolonged labor in both primigravidas and multiparas. Labor is prolonged in occipito-posterior presentations because rotation to the anterior position takes a longer time, while the force of the uterine contractions along a posteriorly placed fetal axis causes extension of the head. Thus longer diameters of the fetal head are presented and create a relative disproportion of a temporary nature. Secondary failure of the head to reach the lower uterine pole does not allow the usual stimulating effect resulting in reflex uterine contractions. This interference with adaptation favors an ineffectually contracting uterus with slowly dilating cervix commonly seen in occipito-posterior presentations.

TABLE VIII. TYPES OF DELIVERY AND CAUSES OF DEATH IN CASES WHERE LABOR WAS PROLONGED FROM ERRORS IN ROTATION AND FLEXION
Forty-four Cases (includes two face and one brow)

	No.	Sepsis	Shock	Hemorrhage	Other
Classical section	5	4	1		
Cervical section	2	2			
Forceps	21	8	7	5	1
Version	9		8	1	
Craniotomy	3	1	1	1	
Spontaneous delivery	4	2		1	1
Multiple	11	3	6	2	

Rest

Time, the guardian angel of obstetric practice, with alternating periods of rest and stimulation, will usually produce the necessary flexion with smaller diameters, descent of the vertex to the sloping planes of pelvic fascia and anterior rotation. The prolongation of such labors may be regarded as a physiological feature of the mechanism. Morphine for rest, atropine for its relaxing influence, a tight abdominal binder, empty bladder and rectum, posture, lying on the side opposite to the fetal back and easily assimilable food may be used with advantage. An eight-hour rest may be followed by the stimulating effect of strong coffee, and very occasionally one or two doses of one minim of obstetrical pituitary extract. Such alternating periods of rest and work will suffice for spontaneous delivery in the majority of instances.

Pathological prolongation of labor occurs when failure of rotation persists or is incomplete, as in transverse arrest, and the uterus is not sufficiently able to complete the task. Manual rotation

and forceps delivery is indicated in many such cases. Forceps should not be used until complete dilatation has occurred, nor to rotate an occiput which is posterior or transverse if manual rotation can accomplish the same purpose.

Where the pelvis is known to be an AP oval or male in type, delivery by forceps and deep episiotomy with the occiput remaining posterior is less traumatic than instrumental rotation of the head. Version is favored for persistently high head, where flexion is still incomplete and with proper regard relative to cephalo-pelvic proportion, presence of amniotic fluid, the condition of the retraction ring, and the quality of the uterine muscle tone. A properly administered deep ether anesthesia is essential while the use of adrenalin solution for its relaxing effect on the uterine muscle is often helpful. It has been well said that the successful handling of occipito-posterior presentations is a mark of one's having mastered the art of obstetrics.

Classical cesarean section was resorted to in five of the series. In this group pelvic measurements were normal, the infants did not weigh above 3200 grams (7.5 pounds) and two of the women had previously borne living children. There did not seem to be any greater indication for the operation than the fact that the labor was prolonged and the patients exhausted. The dangers of infection in long labors is again shown by the fact that four died of puerperal sepsis.

Low cervical section was used after labor had persisted for forty-eight hours in two patients where occipito-posterior was the cause of prolonged labor; both died of sepsis. Whether or not any vaginal antisepsis during these long labors would have helped is speculative. Sulfanilamid was not used in either case.

TABLE IX.

	No.	Sepsis	Shock	Hemorrhage	Toxemia
Large Baby: Twenty-three Cases					
Classical section	5	3	2		
Cervical section	1	1			
Porro section	1	1			
Forceps	9	2	3	3	1
Version	5	1	4		
Spontaneous delivery	2		2		
Multiple operation	4	1	3		
Hydrocephalus: Three Cases					
Classical section	3	2	1		
Breech: Seven Cases					
Extra-peritoneal section	1	1			
Decomposition and extraction	3	2	1		
Spontaneous delivery	3	2		1	
Twins: Three Cases					
Version	2	2			
Forceps	1	1			
Transverse Life: Two Cases					
Porro	1	1			
Version	1	1			

Shock

In this group eight deaths following version were attributed to shock. An analysis of the histories showed that in six cases forceps operations had failed to deliver, to one of these a craniotomy had been added, but this, too, failed. Four women, possibly a fifth, had ruptured uteri. In only two cases was the labor less than 36 hours, in the majority it was over 48 hours. There can be little doubt that traumatic overpowering the resistance of a pathological retraction or contraction ring occurred in the majority of the versions in this group. The solution of such situations is early and competent consultations. When forceps fail and version is contraindicated the Porro operation with extraperitoneal fixation of the stump in infected cases appears the logical final operative procedure.

Oversize Babies

Large babies, 8.5 pounds, 3800 grams, or over, hydrocephalus or twins was the basic cause of prolongation of labor in thirty-eight cases (18.5

per cent), of the series; seventeen of the sixty multiparas. The average duration of labor was forty-four hours. As in the other groups sepsis and shock were the major causes of death. (Table IX.)

Excessive size of the fetus may produce dystocia and prolonged labor through a relative disproportion between the head or shoulder girdle and the pelvis. As a rule, obstruction is infrequent in the average pelvis with a fetus weighing less than ten pounds (4500 grams). In such cases the pregnancy has usually been prolonged, the fetus is postmature and the head does not easily mould. In many instances the size of the shoulder girdle causes the real difficulty in delivery.

An oversized baby is likely if the parents are unusually large physically, the mother a grand multipara or a diabetic. If prenatal examination reveals this a prolonged or difficult labor may be anticipated. Induction of early labor has been suggested if examinations portend a child of eight pounds (3600 grams). In actual labor the same criteria as in contracted pelvis should hold for time and type of operation.

In a case carefully watched from beginning of labor in hospital, with unruptured membranes, vaginal antisepsis, no vaginal examinations, failed test of labor with an oversize fetus may be followed by classical cesarean section. As the objections to this operation are listed one by one, the shift should be to low cervical extraperitoneal or Porro section or craniotomy. Version must be thoughtfully and cautiously chosen as an operation to deliver when forceps fail; the few living children so delivered are outweighed by the maternal deaths from ruptured uteri and shock. It should be recalled in connection with this group of cases that the multipara who has previously borne very large babies reaches a point in her uterine ability and physical capacity where she can no longer be capable of such a strain of labor as may be allowed a younger or primiparous woman.

There were eleven deaths from shock among the twenty-three large baby cases. The length of labor predisposed to this mode of exitus; the choice of gas oxygen anesthesia in three cases was unwise. Of the twenty-three babies in the excessive size group but six were born alive. Ten of the babies weighed from nine to thirteen pounds.

Pathologically prolonged labor may result from hydrocephalus. Antepartum diagnosis was not made. The treatment by cesarean in all three cases even though two of the patients were multiparas, with more than forty-eight hours labor in each case, signifies either missed judgment or unusually extenuating circumstances which did not appear in the history. Reduction of size of head through perforation usually results in spontaneous delivery.

Breech Presentation

Breech presentations are frequently associated with prolonged labors. The extension of time to deliver is not always abnormal. The basic causes of breech presentation are those factors which tend to prevent the breech from easily entering the lower uterine ovoid and causing reflex stimulation. The frank breech enters the pelvis, it is true, but its progress is impeded by lack of lateral flexion from the splinting action of the legs. Such labors may become pathologically prolonged. All diagnosed or suspected breech presentations should have roentgenograms to determine the exact relation of the legs to the fetal body.

Regarding delivery of breech presentation, the radical obstetrician feels that extraction should be done as soon as the cervix is fully dilated, the conservative man feels the breech should be allowed to deliver spontaneously, if possible. The middle ground of interfering when lack of progress has been determined by close observation of the case is the best obstetric practice.

Inertia Uteri

Inertia uteri and other dystocias of soft parts were the basic cause of prolonged labor in forty-four cases (21.3 per cent) of the series; twelve of the sixty multiparas. (Table X.)

Inertia uteri is a frequent cause of prolonged labor. Clinically, two types of inefficient and ineffectual muscular efforts at expulsion are seen. The primary type is present throughout labor from its onset; the secondary type, often confused with the cessation of contractions from general exhaustion of an obstructed labor, develops after a variable length of labor either of the normal or of the primary inertia type and signifies that the uterus in question has been capable of only so many hours' effort, and that

TABLE X.
Inertia Uteri: Thirty-seven Cases

	No.	Sepsis	Shock	Hemorrhage	Other
Classical section	3	2		1	
Forceps	19	8	5	5	1
Version	3	1	2		
Craniotomy	1	1			
Spontaneous delivery	10	4	1	4	1
Undelivered	1		1		
Multiple	1	1			
Fixation of Uterus: Two Cases					
Porro section	1	1			
Version	1	1			
Stenosis of Cervix: Three Cases					
Cervical section	1	1			
Undelivered	1	1			
Forceps	1	1			
Fibromyomata Uteri: Two Cases					
Classical section	1	1			
Forceps	1			1	

usually of a poor degree. Among the reasons suggested for inertia are faulty development of the muscle, poor constitutional types, abnormal innervation of the uterus, the worn out muscle of the multipara or the over-distended muscle of the twin or hydramnion pregnancy.

A common cause might be the altered wall of the previously infected uterus or early fibrosis in the uterine muscle of the elderly primigravida. Malnutrition may play a more significant rôle than we suspect, a woman who has had an excellent protein intake during pregnancy seldom has inertia during labor. I am unconvinced of benefits, per se, from prenatal administration of calcium or quinine or the use of a low salt diet. To me these cases are as difficult to anticipate as they are to treat. I regard them as pathologically prolonged labors since the basic cause is an abnormal condition.

From the unusual degree of pain associated with the inefficient contractions of inertia the factor of abnormal innervation appeals greatly. If the patient's morale can be controlled and supported by periods of rest under morphine and easily assimilable food, periods of alternate effort will eventually increase in intensity to the point where delivery becomes feasible by operation, if not it does occur spontaneously.

Secondary inertia, on the other hand, leaves one in a quandary of whether to attack or retreat, to stimulate, operate or sedate. Decision must depend on such factors as length of labor, condition of the mother and fetus, and degree of dilatation and descent of the presenting part. Rest under morphine and support of intravenous dextrose brings out reserve strength. Further periods of rest may be advisable before resorting to operation.

Artificial shortening or termination of the first stage, here or where other basic causes obtain, calls for mature judgment, a high degree of obstetric skill and favorable environment.

Dilatation of the cervix may be accomplished by an insertion of a bag. If dilatation is indicated to permit immediate operative delivery, cervical incision should be made.

Forceps delivery is most favorable. Cesarean section is seldom indicated. One of the three cesareans in this group had a pathological retraction ring after a 67-hour labor. Failed forceps, failed version and septic death after cesarean with a stillborn child points to missed opportunity at an earlier hour, or absence of judgment in not choosing a craniotomy or embryotomy on a dead fetus. The forceps series here emphasize the surgical axiom not to operate in shock or its premonitory exhaustion.

Cervical Dystocia

Other types of soft tissue dystocia in this group of 206 fatal cases were associated with prolonged labor. (Table X.)

Much has been written in regard to the part the cervix plays in producing a prolongation of labor. In most instances the failure of obliteration and dilatation of the cervix is dependent upon processes taking place in the lower uterine segment and in the corpus. In only a few cases is the fault inherent in the cervix itself.

A. C. Ivy has summarized the delay in the first group as being due to, first, an incoördina-

tion of the wave of contraction; secondly, to a failure of the property of the uterine muscle fibers responsible for retraction in taking up the "slack," or holding the progress made by the preceding contraction; and thirdly, failure of engagement or descent of the presenting part in the pelvis causing a loss of force of the contractions in effacement and dilatation. The first two ideas support the view expressed by Kamperman that the progress noted in the cervix reflects the effectiveness in labor of the uterus as a whole.

Ivy considers four factors resident in the cervix may be responsible for its failure to dilate normally. There are: first, failure of the isthmus to completely unfold and be included in the general uterine cavity after three or four months of pregnancy. This results in a long cervix at term. Secondly, failure of the circular musculature about the obstetric internal os to manifest normal relaxation. The reason for this hypertonus or spasticity is obscure. Thirdly, failure of the external portion of the cervix to soften in the normal manner in response to the sex hormones. Fourthly, the presence of an abnormal amount of connective tissue due to cervicitis preceding infection or mechanical trauma.

The cervix was definitely incriminated only three times in this series. The women were twenty, thirty, and thirty-four years of age; the labors, sixty, ninety-six, and one hundred and three hours' duration.

In the first instance, a young primigravida, the cervix was noted as being thick and cartilaginous in consistency. Death resulted from sepsis following cervical section. In the second case it was noted that a hard, stenotic ring was present about one inch above the external os. There was a history of previous induced abortion. Death resulted from intrapartum sepsis, undelivered. The third case, a syphilitic negress, had a nonyielding external os. For sixty of the 103 hours the head was on the pelvic floor. When dilatation finally occurred low forceps completed the delivery. Death from sepsis followed; at autopsy perforation of the lower uterine segment from pressure, necrosis was found. The case seems to have been a typical one for cervical incisions.

TABLE XI. TOXEMIA AND NEPHRITIS
Twenty-two Cases

	No.	Sepsis	Shock	Hemorrhage	Toxemia	Heart
Classical section	3	1	1			
Forceps	8	4			4	
Version	4	3	1			
Spontaneous delivery	6	3			3	
Undelivered	2				1	1

The few cases where cervical dystocia was present in this series is of interest when one recalls that in the recent maternal care study in Michigan the average finding of rigid cervix in labor reported by all attendants was given as 6.4 per cent, and that manual dilatation or incision was practiced in 5.3 per cent of all cases reported. In the hospital series, 3 per cent of the labors were considered prolonged because of a toxemic state of the woman; in the mortality group there were twenty-two labors with toxemia as the basic cause of delay, 10.7 per cent. The average duration of these labors was sixty hours. (Table XI.)

Toxemias

Dieckmann, in his recent monograph, states that 35 per cent of all toxemic primigravidas have labors over eighteen hours and 25 per cent have labors over twenty-four hours. It is to be presumed that the depressing constitutional effect of the toxemias of pregnancy of any type would have a modifying effect on the uterine musculature. The question as to the proper time and manner of terminating pregnancy in toxemic women is an old one and it will not be debated in this paper except to say that the obstetric fac-

tors of parity, period of gestation and the physiological preparedness of the cervix, consistency, obliteration and dilatation should always be borne in mind. Primarily the severity of the toxemia and failure of its improvement under treatment are guiding influences.

The tendency to an instability of the vascular and metabolic systems, to an inertia induced by toxemia, to a lack of resistance to infection and to an inability to withstand traumatic vaginal operative deliveries favors the choice of many obstetricians today of promptly terminating toxemias of increasing severity, especially, in primigravidas, by hysterotomy under local anesthesia.

Ten of the twenty-two labors were induced by rupture of the membranes, insertion of rubber tubes into the uterine cavity or insertion of gauze packs into the cervix. The three cesarean operations followed induced labors.

Multiple operative procedures are not well tolerated in progressively increasing toxemias. While the danger of infection introduced by tube induction makes classical cesarean an operation fraught with risk, all these cases showed such faults as lack of prenatal care, refusal of hospitalization by the patient, use of chloroform and nitrous oxide anesthesia and the use of pituitary extract in labor, with probably two instances of pituitary extract induced fatal vascular collapse.

Placenta Previa

Three cases of placenta previa gave rise to labor of over twenty-four hours each. With the onset of uterine contractions hemorrhage occurred in all until at admission to hospital, one woman died of shock undelivered and the other two survived version and extraction for two and twenty-five minutes respectively. The location of the implantation may have hindered more effectual labor in preventing engagement of the fetal head. In all three cases missed diagnosis was a basic error. (Table XII.)

In eight cases medical or surgical conditions were responsible for prolongation of labor through the toxic or depressing effects of infections such as pneumonia, tuberculosis and pyelitis. Other anomalies producing prolonged labor included one case of rupture of the uterus at seven months pregnancy. The final case in this series was one where an acute intestinal obstruction developed during labor in a primigravida. The labor lasted seventy-five hours, and ended in a spontaneous delivery of a living child. There were no basic obstetrical causes for a long labor. Immediately after delivery, an intestinal resection was performed. Death resulted on the third day, postpartum and postoperative. Though extremely rare, such a case possesses some interesting questions for both surgical and obstetrical judgment. Should intestinal operation have been performed at once and the labor allowed to go on normally? According to Cosgrove, as I understand his teaching, the latter would be preferable, unless there was an obstetric reason for abdominal delivery.

TABLE XII.
Rupture of Uterus: One Case

	No.	Sepsis	Shock	Hemorrhage
Evacuations of uterus	1	1		
Placenta Previa: Three Cases				
Version	2			2
Undelivered	1			1
Medical Conditions: Eight Cases				
Pneumonia	3			
Tuberculosis	2			
Malnutrition	1			
Intestinal obstruction	1			
Pyelitis	1			

There were thirty-five cases (17 per cent) in this series in which multiple operations were performed. Fifteen patients died of sepsis, seventeen died of shock, three died of hemorrhage. Many of the histories of this series reflect obstetric inexperience or incompetence. The greater likelihood of the woman with a prolonged labor to become infected, is increased with repeated intra-uterine manipulations.

The shock-producing effect of the physical and mental strain of long labor is accentuated by multiple operative procedures. In this series the most frequent combination of operations was failed forceps and version, or failed forceps and cesarean section. Judgment and skill, borne of long obstetric experience, are the solutions to such termination of prolonged labors.

Rupture

There were fourteen cases of rupture of the uterus, approximately 7 per cent, in this series. Rupture of the uterus followed version in nine instances, in another case it followed attempted version, after failed forceps, and final craniotomy. Here, it was felt the attempt at version was responsible. Three cases of rupture of the uterus followed forceps deliveries. The rupture following forceps were in the lower uterine segment and were likely due to unskillful insertion of the blades or to trauma of forcibly overcoming disproportion. Among the contra-indications for version, as seen in many of these cases, was the presence of a tetanically contracted uterus or a pathological retraction ring. These are most emphatic contra-indications.

A discussion of this subject cannot be closed without a comment on fetal wastage. Death rate of the fetus or newborn in prolonged labor, from whatever basic cause, is high, and results from asphyxia, anoxia or direct injury. In this series eighty infants were stillborn, nine women died undelivered (a postmortem abdominal hysterotomy salvaged one survivor in this group) and fourteen neonatal deaths were recorded. The total, 102 infant deaths, is approximately fifty per cent of the total series. Among the sixty-six cesarean sections, of all types which were performed, fifteen babies were stillborn. It is evident that the tardy recognition of the basic causes of prolonged labor and delay in instituting properly chosen procedures to deliver takes a tremendous fetal toll.

Summary

Labor may be prolonged beyond the average duration by various abnormalities of the three factors concerned in its mechanism. Depending upon the extent of the fault the prolongation may be regarded as physiological or delayed or it may develop into a true pathological status.

If the delay is due to contracted pelvis, oversized fetus, or errors of rotation and flexion the basic cause should have been recognized antepartum. The delay should have been anticipated and the management of the case planned long before any arbitrary time limit. Consultation, required in many institutions, by providing competent obstetric judgment, will help in determining the proper course to pursue in unplanned cases or unrecognized situations.

Women die after prolonged labors not so much from the cause producing the delay but due to faulty management of the labor. Deaths result from infection, exhaustion and shock, and hemorrhage. Infection can be combated by vaginal antisepsis, keeping up resistance, choice of proper operation to deliver, asepsis and skilled technique in delivery and the use of the sulfa group of drugs.

Exhaustion may be avoided by rest induced by morphine and the supporting influence of infusions of dextrose. These measures tend to lessen shock. The avoidance of multiple operations and tissue devitalization can be accomplished through choice of proper operation. This demands mature obstetric judgment and skill. The choice of anesthetic agent is highly important.

Hemorrhage is lessened if tonicity can be restored to the uterus before delivery. The third stage is best managed in as near a normal mechanism as possible. When oxytocics fail to produce contraction and retraction in a tired uterus, intrauterine tamponade is imperative, and fluid and blood replacement is of the first order.

Inertia uteri constitutes both a medical and an obstetrical problem. Purposefully allowing labor to be prolonged uniformly gives better results than too early stimulation or operation. Intelligent, watchful waiting must not, however, become unintelligent hopeful expectancy.

Cervical dystocia is rare. Where it is definitely present, radical intervention may at times be indicated.

Toxemia predisposes to prolonged labor through its reflex influence on the organism as a whole. In many instances hysterotomy is less traumatic to both mother and fetus than long and operatively terminated vaginal delivery.

A recital of the circumstances surrounding maternal deaths associated with labors of more than normal duration by the attending obstetrician before a medical group followed by a frank and open discussion of such facts has proven in Philadelphia to be a salutory method of diminishing the incidence of such tragedies.

MSMS

May 24, 1943, is the four hundredth anniversary of Nicholas Copernicus, the great Polish astronomer. Few know that he was by profession a Doctor of Medicine. The Kosciuszko Foundation is celebrating at Carnegie Hall, New York, and has issued a beautiful illuminated booklet on the life and accomplishments of Copernicus.

EDITORIAL

FUTURE OF MEDICINE

■ For the past several months the future aspects of the practice of medicine have been clouded by many signs pointing to changing conditions. Some of these have been for more control of our private practice in the way of restrictions or regimentation, but the most dangerous trends have been towards relaxation of our standards under which the people of the United States have received the best medical service ever offered. Most of these changes have been by executive decree or court order, and they have pointed towards state medicine. The Court refused to decide whether we are a profession, but declared our medical societies must not interfere in any way with the BUSINESS of furnishing medical services by a group or organization to its members or subscribers. The medical societies tried to so arrange that the subscribers could choose their own doctors, but the court said that is illegal, and the medical societies must not interfere in any way with the "Business" affairs of the groups. To be interested in the terms of contract or qualifications of the contract physicians is prohibited. This prohibition of activities opened the way for Social Security to announce a plan for care of the people "from the womb to the tomb," with a ten per cent deduction of income. As a matter of fact that proposal came immediately the Court's decision had been published. Most of us know something about the Beveridge Report, in England, proposing a rather complete coverage for medical and health services, for all the people. The English plan exempts certain services saying that private enterprise had already done a good job.

The Armed forces have ordered into service all teen-agers who have commissions, or ratings, and are in school. All others are being inducted. They will be placed in uniform and selections made for continuation of school training. The armed forces will determine who is to take premedical courses, dentistry, or theology. The soldier will not be allowed to choose his school, but may be consulted as to the profession if any he desires to choose. He will then be sent to school with quarters and subsistence, tuition, and a basic soldier's pay, under commanding officers and marched to classes. The three-year premedical course now required by twenty-three states is cut to five twelve-week sections and that telescoped into fifteen months. Those states can change their registration law! Under present laws these student will not be able to take the examinations and practice,* but there is a way out of that. The United States Public Health Service can issue commissions and they can practice in any state of the union.

These several instances of government by decree have provoked worries among thinking doctors and medical leaders in many of our states, and editorial comments are numerous.

THE OUTLOOK IMPROVES

■ Signs are in development that there may be some semblance of other and more democratic control. The House of Representatives, and the Senate have both voted against the decree of the President about the $25,000 net after federal taxes. This was proposed and rejected twice by the congress, according to able Editor Grove Patterson in the *Toledo Blade* of March 18, 1943: "That is a wholesome sign of a returning sense of responsibility by the legislatures for legislation. For too long a time Congress refused to accept that responsibility. That is why there has been so much legislating from the White House, by decree."

There are many signs that the Congress is again assuming the direction of legislation. A resolution has been prepared directing the President to assume leadership in the creation of a supreme war council. The Ways and Means Committee turned down the "skip a year" income tax plan, but Congress seems to be determined to do something about it. The Powers-

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*"The admission of these graduates to private practice after the war will require consideration on a state level and legislation as needed." Brig. Gen. Joseph M. Dalton, Army Personnel Section at National Conference on Medical Service, Chicago, February 15, 1943.

Winning the War—At Home and Abroad

The membership of the Michigan State Medical Society stands today at 4,445. This large enrollment includes 1,663 military members. These self-sacrificing, courageous Doctors of Medicine, as officers in the Medical Corps of the Army and Navy, are serving their country in all parts of the world. Of these members, we are mightily proud. We wish them Godspeed and an early return to Michigan with Victory 'round their shoulders!

Praise is also due those physicians who must remain on the home front. These Doctors of Medicine are working two and three times harder than ever before to see that medical service is supplied to our industrial and civilian population. They are not sparing themselves but actually shortening their lives by over-work and the pressure of anxiety. Because of their contribution medical care is being received by our war workers and all who need it. The excellent health of the people of America—the best in the nation's history—speaks in a great voice of the splendid labors being done by our medical army at home.

Michigan Doctors of Medicine know that a war must be won. Their work, whether among the dangers of the armed forces or in the triple-quick practice of medicine in their own communities, is all to that end.

W. H. Cummings

President, Michigan State Medical Society

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President's



Page

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that-be have consistently refused to consider women doctors for commissions in the armed forces, but a bill has just been passed granting them commissions, to be equal to the men's, and with the same pay.

It has taken forty years to build up a highly educated and wonderfully trained medical profession, and to set up laws providing and guaranteeing the very best for the care of our people. This is a progress unequalled anywhere in time or place in history, and an achievement for which our predecessors, and contemporaries may well be proud. We are not ready to see even one little bit of this progress lost by executive decree. If by legislation, or court decision, we must submit; but we will have our protest. Chairman Walter F. Donaldson of the American Medical Association's Public Relations Committee told us to not give up lightly even for a supposed temporary advantage the things we had built by so many years of endeavor. That is sound advice, and if the medical profession will adhere to it, the future will be good.

From the standpoint of training, and practice, research and advancement of techniques we can look forward with confidence, and this writer believes the sound judgment and sterling qualities of leadership inherent in the profession will surmount any obstacles that may present themselves. The profession has weathered many storms in the past, and always to its own betterment, as well as great advantage to the people whom we serve. The same thing will happen as the result of this time of trial. We must have many changes as a result of the world revolutionary times through which we are passing, and some of those changes will be radical. But if we take a hand in the shaping of those changes they will at least be our own handiwork.

Above all we must not go backward, and with courage and conviction, with everyone helping, we WILL go forward.

WOMEN DOCTORS COMMISSIONED

■ The press has announced the passage of a bill giving commissions to women doctors. Our women physicians have been striving for this for many years. During the other war they thought they should be granted commissions, and some of them served as contract surgeons in the army, acting in hospitals, giving anesthetics, etc. One of our Michigan women doctors served overseas (Bertha Davis Orr, M.D., now of Flint).

It is only proper that this step should be taken, and especially after giving nurses commissions. There will probably not be many women doctors commissioned, but some will, and it is fitting. They practice side by side with the men in everyday life, and while some will think they may be handicapped, still they have made themselves successful, and no mean competitors. They should be recognized in the armed forces, and they have just as many rights as women in any other occupation. We have commissioned WAACS, WAVES, Nurses. Why not doctors?

SELECTIVE SERVICE EXAMINATIONS

■ National headquarters of Selective Service System has issued Medical Circular, Number 3, dated March 1, 1943. This is a modified listing of the defects for which selectees are to be rejected—that is, placed in 4F rating, at the preliminary examination by the draft board examiners. There are some changes from the screening circular under which these examinations have been conducted for several months. The circular stresses that the examinations must be made *in the nude,* and that "enthusiastic acceptance by the examining physicians is essential to the program." Col. L. G. Roundtree in his letter of transmittal to the editor says:

> "As you know, the demands on the medical profession are unbelievably great and the number of doctors entering the military service very large. Since Pearl Harbor the quotas have been increasingly large, thus the number of men to be examined each month is in proportion. Under the circumstances it is impossible for the examining physicians of Selective Service to carry out the complete physical examination on all registrants.
>
> "Selective Service is much impressed with the devotion and the patriotism of its examining physicians and dentists. As you no doubt know these professional men in Selective Service are making the preliminary examination of registrants who are to be inducted into all branches of the military service. This represents a national service of great magnitude and importance."

The medical profession has done a tremendously important service in making all these examinations. Many of them have been done the hard way, by individual effort, but most boards have made examinations by groups, each man

seeing all the men to be examined, and making the observations in the fields assigned to him. In the communities where most of the active doctors have gone to service that is the only possible way, and that is still a burden. The profession has never shirked a patriotic duty, however, and will carry on.

POSTWAR PLANNING

■ Mr. Charles F. Kettering spoke at the dinner following Michigan's Postgraduate Industrial Medical and Surgical Conference, April 8, 1943, calling especial attention to some postwar problems. He said human nature does not change in two years, even of war, what it has taken two million years to build. He said:

"Given a point in this long history of the race, such as the present era, the really valuable thing we can do is to know ourselves better, and know each other better, as we now are.

"The difficulty with you doctors is that you have allowed an amazing mass of advertising about miracle medicines and cures to grow up about you, but you have drawn into your shells and neglected to let the people know what you really are and what you are doing.

"I should like to see a text book on the history of medicine, relating the marvelous achievements of medicine, put into the schools.

"The laity does not know you, and your patients are generally afraid of you, because they do not understand what you are doing to them, or why.

"I would like to see hospitals made over into real centers of sociability and I think every person should know some doctor who is not doctoring him, to get acquainted with doctors as persons and find out what is in their minds.

"To me the great thing coming out of this conference today is the opening of your minds to each other."

The Conference was sponsored by The Committee on Industrial Health, Michigan State Medical Society, in coöperation with The Department of Postgraduate Medical Education, University of Michigan. It was attended by over 400. Similar conferences are being held in many states, and are accomplishing a great work during the present Industrial Medicine rejuvenation.

POSTGRADUATE FOUNDATION

■ A new War Financing program is in progress involving the sale of thirteen billions of dollars of War Bonds. Our members will buy many of these Bonds, and should buy every one possible. We have a war to win and for those of us at home purchasing Bonds to the limit is no hardship in comparison to what our brothers have and are doing. And while buying these bonds why not send one to the Michigan State Medical Society Foundation for Postgraduate Medical Education. This Foundation has been established by the society during the past year and has already received donations. When buying Bonds our members who wish could make their money do a double duty. Help win the war and help make the postwar period more secure.

STOP! LOOK! LISTEN!

So far, we have tried to urge doctors voluntarily to move into the areas where shortages are acute. This, however, proved an unsuccessful method in Great Britain, and I am afraid we shall make the same discovery. In many cases, organized medical groups have been the stumbling block. Doctors who have gone into the services and given up practices they have built up sometimes have not wanted them taken over by other young men while they are gone.

Men who have lucrative practices do not want to move into an area which may need them badly, but which will give them inadequate income and, frequently, an impossible housing problem for their families. County medical societies and other groups have opposed, in many cases, anything which savors of Government control, and at times even the sending of public health doctors.

These doctors, as a rule, are sent only in case of emergency or disaster. It looks to me, however, as if the health needs of the civilian population may force us to abandon our volunteer system and to submit to mandatory placement for the duration of the war.

—Eleanor Roosevelt, *"My Day,"* May 1, 1943.

Procurement and Assignment has been sending Doctors of Medicine into areas of need, and of emergency for several months, and has done a rather good job. Many men have been replaced in Michigan. There is still some need, and places for more men to be resettled. This has been a strictly voluntary effort, has met with universal approval, and has assured medical care. In cases of disaster there never was a time that all doctors needed have not immediately volunteered.

Our voluntary system has sufficed so far, and will do so to the end of the War Emergency, but we look forward with misgivings to Mandatory placement. American medicine will prove itself adequate to this unprecedented call if allowed to solve its own problems. Mandatory methods will increase confusion.

Michigan State Medical Society

Roster 1943

[An "M" following a name indicates active military service]

Allegan County

Beckett, M. B.....M
Benning, H. M.....Allegan
Brown, Lewis Freeman.....M
Dickinson, C. A.....Wayland
Dolfin, W. E.....M
Flinn, C. C.....Allegan
Hamelink, M. H.....Hamilton
Hudnutt, Orrin Dean.....Plainwell
Johnson, E. B.....Allegan
Johnson, H. H.....Martin
Mahan, James E.....Allegan
Medill, W. C.....Plainwell
Ramseyer, Gladwin E.....Plainwell
Shepard, C. Lyle.....Otsego
Stuch, Howard T.....M
Stuck, Olin H.....Otsego
Vaughan, W. R.....Plainwell
Van Der Kolk, Bert.....Hopkins
Van Ness, J. H.....Allegan
Walker, Robert J.....Saugatuck

Alpena County

Bunting, John W.....Alpena
Burkholder, Harry J.....Alpena
Carpenter, Clarence A.....Onaway
Hier, Edward A.....Alpena
Kessler, Harold .....M
Nesbitt, Wm. E.....M
Ramsey, J. A.....M
O'Donnell, F. J.....Alpena
Parmenter, E. S.....Alpena
Purdy, John W.....Lachine
Rutledge, S. H.....M
Trudeau, J. M.....M
Wienczewski, Theophile .....M

Barry County

Altland, J. K.....M
Finnie, R. G.....M
Fisher, Gordon F.....M
Gwinn, A. B.....Hastings
Harkness, Robert B.....Hastings
Keller, Guy C.....Hastings
Lathrop, Clarence P.....Hastings
Lofdahl, Stewart .....Nashville
Lund, Chester A. E.....Middleville
McIntyre, K. S.....M
Morris, Edgar T.....Nashville
Rees, Kendall B.....Dowling
Wedel, Herbert S.....Hastings

Bay-Arenac-Iosco-Gladwin Counties

Alcorn, Kent .....Bay City
Allen, A. D.....Bay City
Andrews, F. T.....Lansing
Asline, J. N.....M
Ash, C. W.....Bay City (Ret.)
Austin, Justis .....Tawas City
Baker, Charles H.....Bay City
Ballard, Sylvester L.....Bay City
Ballard, W. R.....Bay City
Boulton, A. O.....Bay City
Brown, G. M.....Bay City
Connelly, C. J.....M
Criswell, R. H.....Bay City
Dardas, M. J.....M
DeWaele, Paul L.....M
Drummond, Fred .....Kawkawlin
Dumond, V. H.....Bay City
Foster, L. F.....Bay City
Freel, John A.....Bay City
Gamble, W. G., Jr.....Bay City
Gronemeyer, W. H.....M
Groomes, Charles .....Bay City
Grosjean, J. C.....Bay City
Gunn, Robert .....Standish
Hall, R. F.....M
Hagelshaw, G. L.....M
Hasty, Earl .....Whittemore
Healy, Gaillard H.....Bay City
Hess, C. L.....Bay City
Heuser, Harold H.....Bay City
Horowitz, S. Franklin.....M
Huckins, E. S.....Bay City
Hughes, E. C.....Bay City
Husted, F. Pitkin.....M
Jacoby, A. H.....M
Jens, Otto .....Essexville
Jones, Jerry M.....Bay City
Keho, John .....Bay City
Kerr, Wm. .....Bay City
Kessler, Mana .....Bay City
Kessler, S. .....Bay City
Knobloch, Howard .....M
Lane, Milton .....M
Lerner, David .....M
McDonnell, Walter R.....M
McEwan, J. H.....Bay City
MacPhail, Joseph .....M
Medvesky, M. J.....M
Miller, Edwin C.....M
Mitton, Orland W.....East Tawas
Moore, George W.....Bay City
Moore, Neal R.....M
Mosier, D. J.....M
Pearson, Stanley M.....M
Perkins, Roy C.....Bay City
Reutter, C. W.....M
Riley, R. B.....M
Scrafford, Royston Earl.....Bay City
Shafer, H. C.....M
Sherman, R. N.....Bay City
Slattery, M. R.....Bay City
Smith, William Marshall.....Bay City
Staley, Hugh .....Omer
Stinson, W. S.....Bay City
Stuart, Kenneth .....Bay City
Swantek, Charles M....Bay City (Ret.)
Tarter, Clyde S.....M
Timreck, Harold A.....M
Urmston, Paul R.....Bay City
Warren, E. C.....Bay City
Weed, John.....East Towas (Ret.)
Wilcox, J. W.....Bay City
Wilson, Thomas G.....Bay City
Wittwer, E. A.....Bay City
Woodburne, H. L.....M
Zaremba, Aloysius J.....Bay City
Ziliak, A. L.....Bay City

Berrien County

Allen, J. U.....Benton Harbor
Anderson, Bertha.....St. Joseph
Bartlett, W. M.....M
Belsley, Frank K.....Benton Harbor
Bliesmer, A. F.....St. Joseph
Brown, F. W.....Watervliet
Brown, Rolland J.....M
Burrell, H. J.....Benton Harbor
Cawthorne, H. J.....Benton Harbor
Conybeare, R. C.....Benton Harbor
Crowell, Richard .....M
Eidson, Hazel.....Berrien Springs
Ellet, W. C.....M
Emery, Clayton.....St. Joseph
Faber, Michael.....Benton Harbor
Friedman, Morris.....New Buffalo
Gillette, Clarence H.....Niles
Hanna, P. G.....St. Joseph
Harper, Ina.....Benton Harbor
Harrison, L. L.....Niles
Hart, Russell T.....Niles
Henderson, Fred .....Niles
Henderson, Robert .....Niles
Herring, Nathaniel A.....Niles
Hershey, Noel J. .....M
Huff, H. D.....Niles
King, Frank A.....Benton Harbor
King, Frank, Jr.....M
Kling, H. C.....Niles
Kok, Harry.....Benton Harbor
Leva, John B.....M
Littlejohn, Wm. .....Bridgman
McDermott, J. J.....St. Joseph
Merritt, Charles W.....St. Joseph
Miller, E. A.....Berrien Springs
Mitchell, Carl A. .....Benton Harbor
Ozeran, Charles J.....Benton Harbor
Pritchard, H. M.....Niles
Reagan, Robt. E.....M
Rein, Gerald.....Benton Harbor
Richmond, D. M.....St. Joseph
Ruth, J. Griswold.....M
Smith, W. A.....Berrien Springs
Sowers, Bouton .....M
Spawr, C. V.....Benton Harbor
Strayer, J. C.....M
Thorup, Don W.....Benton Harbor
Waterson, Roy S.....Niles
Westervelt, H. C.....Benton Harbor
Yeomans, T. G.....St. Joseph

Branch County

Andrews, Frank A.....Coldwater
Bailey, J. E.....Coldwater
Beck, Perry C.....Bronson
Bien, W. J.....Coldwater
Chipman, E. M.....M
Culver, Bert W.....Coldwater
Far, S. E.....Quincy
Fraser, R. J.....M
Joerin, William .....M
McLain, R. W.....Jackson
Meier, H. J.....Coldwater
Mooi, H. R.....Union City
Olmstead, Kenneth L.....M
Phillips, F. L.....Bronson
Schultz, Samuel .....Coldwater
Scovill, H. A.....M
Smith, L. Lloyd.....M
Thomas, J. A.....Coldwater
Wade, R. L.....Coldwater
Walton, N. J.....Quincy
Weidner, H. R.....M

Calhoun County

Amos, Norman H.....M
Baribeau, R. H.....Battle Creek
Barnhart, Samuel E.....Battle Creek
Becker, H. F.....M
Bonifer, Philip P.....M
Braham, Wilbur.....M
Brainard, C. W.....M
Campbell, Alice .....Albion
Campbell, R. J.....M
Capron, Manley J.....M
Church, Starr K.....Marshall
Chynoweth, W. R.....M
Cooper, J. E.....Battle Creek
Curless, Grant R.....M
Curry, Robert K.....M
Derickson, E. C.....Burlington
Dickson, A. R.....Battle Creek
Dodge, Warren M.....M
Fairbanks, Stephen .....Albion
Finch, D. L.....M
Forsyth, J. F.....M
Frank, David L.....Battle Creek
Fraser, R. H.....Battle Creek
Funk, L. D.....Athens
Gething, Joseph W.....Battle Creek
Giddings, A. M.....Battle Creek
Gorsline, Clarence S.....Battle Creek
Graubner, F. L.....M
Hafford, Alpheus T.....Albion
Hansen, E. L.....Battle Creek
Hansen, Harvey C.....M
Haughey, Wilfrid .....Battle Creek
Heald, C. W.....Battle Creek
Herzer, Henry A.....Albion
Hills, C. R.....Battle Creek
Holes, Jesse J.....Battle Creek
Holtom, B. G.....Battle Creek
Howard, W. L.....Battle Creek
Hubly, James W.....M
Humphrey, Archie E.....Marshall
Humphrey, Arthur A.....M
Jeffrey, J. R.....Battle Creek
Jesperson, Lydia .....Battle Creek
Jones, T. K.....M
Keagle, Leland R.....M
Keeler, K. B.....Albion
Kellogg, John H.....Battle Creek
Kingsley, Paul C.....M
Kinde, M. R.....M
Kolvoord, Theodore .....Battle Creek
LaFrance, N. Francis.....M
Landon, Charles C.....Battle Creek
Levy, Joseph .....M
Lewis, W. B.....Battle Creek
Lowe, H. M.....Battle Creek
Lowe, Kenneth .....M
Lowe, Stanley T.....M
MacGregor, Archibald E...Battle Creek
Manni, Lawrence C.....Battle Creek
McPherson, E. G.....Marshall
Meister, F. O.....M
Melges, Fred J.....Battle Creek
Mercer, C. M.....Battle Creek
Morrison, Donald B.....M
Moshier, Bertha .....Battle Creek
Mullenmeister, H. F.....M
Mustard, Russell .....Battle Creek
Norman, Estella G.....Battle Creek
Norton, Richard C.....M
Patterson, Adonis .....M
Putman, W. N.....Battle Creek
Robbert, John.....Climax
Robins, Hugh .....Marshall
Rorick, Wilma Weeks.....Battle Creek
Rosenfeld, Joseph E.....Battle Creek
Roth, Paul .....Battle Creek
Royer, C. W.....M
Schelm, George W.....Battle Creek
Selmon, Bertha L.....Battle Creek
Sharp, A. D.....Albion
Shipp, Leland P.....Battle Creek
Sibilsky, A. Clark.....Battle Creek
Simpson, Robert S.....M
Slagle, George W.....M
Sleight, James D.....M
Sleight, Raymond D.....Battle Creek
Smith, T. C.....M
Stadle, Wendell H.....M
Stiefel, Richard .....Battle Creek
Tannenholz, Harold S.....Battle Creek
Taylor, Clifford B.....M
Toms, Roland E.....Battle Creek
Thompson, Oliver E.....Battle Creek
Upson, W. O.....Battle Creek
Van Camp, Elijah.....Battle Creek
Vander Voort, W. V.....Battle Creek
Vollmer, Maud J.....Moline, Ill.
Walters, F. R.....Battle Creek
Walters, Royal W.....Battle Creek
Watson, Bernard .....M
Wencke, Carl G.....Battle Creek
Whyte, Bruce .....Battle Creek
Winslow, Rollin C.....Battle Creek
Winslow, Sherwood B.....Battle Creek
Zindler, George A.....Battle Creek
Zinn, Karl .....M

Cass County

Adams, U. M.....Marcellus
Clary, R. I.....M
Cunningham, E. M.....Cassopolis
Greene, George S.....Dowagiac
Hickman, John .....M
Kelsey, James H.....Cassopolis
Loupee, George .....Dowagiac
Loupee, S. L.....Dowagiac
Lyman, W. R.....Dowagiac
Myers, Charles M.....Dowagiac
Newsome, Otis E.....Dowagiac
Pierce, Kenneth C.....Dowagiac
Rice, Franklin .....M
Swengel, D. H.....Cassopolis
Zwergel, E. H.....Cassopolis

Chippewa-Mackinac Counties

Bandy, Festus C.....Sault Ste. Marie
Birch, Wm. .....M
Blain, James G.....M
Blair, H. M.....M
Conrad, George A.....Sault Ste. Marie
Cornell, Eliphalet A...Sault Ste. Marie
Cowan, Donald .....M
Darby, J. F.....St. Ignace
Gilfillan, E. O.....M
Hagele, Marie A.....Sault Ste. Marie
Hakala, L. J.....M
Harrington, H. M.....Sault Ste. Marie
Littlejohn, David ....Sault Ste. Marie
McBryde, Lyman M...Sault Ste. Marie
Mertaugh, W. F.....M
Moloney, F. J.....Sault Ste. Marie
Montgomery, B. T.....Sault Ste. Marie
Rhind, E. S.....Sault Ste. Marie
Scott, D. F.....Sault Ste. Marie
Vegors, Stanley H.....Sault Ste. Marie
Wallen, LeRoy J.....M
Webster, E. M.....Sault Ste. Marie
Willison, C. .....Sault Ste. Marie
Wood, Neal H.....Mackinac Island
Yale, I. V. .....Sault Ste. Marie

Clinton County

Bennett, George W.....Elsie
Cook, Bruno .....Westphalia
Elliott, Bruce R.....Ovid
Foo, Charles T.....St. Johns
Frace, Guy H.....St. Johns
Hart, Dean W.....M
Henthorn, A. C.....St. Johns
Ho, Thomas Y.....St. Johns
Luton, F. E.....St. Johns
McWilliams, W. B.....Maple Rapids
Russell, Sherwood R.....M
Stoller, R. Paul.....Fowler
Wahl, George Edward.....M

Delta County

Backus, Arthur .....Powers
Benson, G. W.....Escanaba
Boyce, D. H.....Escanaba
Brenner, Ervine J.....M
Carlton, A. J.....Escanaba
Chenoweth, Nancy R.....Escanaba
Clausen, Claire H.....M
Defnet, Harry John.....Escanaba
Diamond, J. A.....Gladstone
Frenn, N. J.....Bark River
Fytie, James .....M
Groos, Quinten Harold.....Escanaba
Gross, Louis P.....Escanaba
Hult, Otto S.....Gladstone
Kitchen, A. S.....Escanaba
Lemire, Wm. A.....M
Lindquist, N. L.....Manistique
Long, Harry W.....Escanaba
McInerney, Thomas A.....M
Miller, Albert H.....Gladstone
Mitchell, James D.....Gladstone
Moll, G. W.....Escanaba
Shaw, George A.....Manistique
Walch, J. J.....Escanaba

Dickinson-Iron Counties

Addison, E. R.....Crystal Falls
Alexander, W. H.....Iron Mountain
Anderson, E. B.....Iron Mountain
Boyce, George H.....Iron Mountain
Browning, James L.....M
Fiedling, William .....Norway
Fredrickson, Geron .....Iron Mountain
Gloss, Kenneth E.....M
Haight, H. H.....M
Hayes, R. E.....Sagola
Huron, W. H.....Iron Mountain
Irvine, L. E.....Iron River
Kofmehl, William J.....Stambaugh
Levine, D. A.....Iron River
McEachran, Hugh D.....M
Menzies, Clifford.....Iron Mountain
Retallack, R. C.....M
Smith, Donald R.....Iron Mountain
White, Robert E.....Stambaugh
Witkow, Alexander.....Iron Mountain

Eaton County

Arner, Fred L.....Bellevue
Brown, B. Philip.....M
Burdick, Austin F.....Grand Ledge
Carothers, Daniel J.....M
Clements, F. W.....Eaton Rapids
Engle, Paul .....Olivet
Goff, S. B.....M
Hannah, H. W.....Charlotte
Hargrave, Don V.....Eaton Rapids
Huber, Chas. D.....Charlotte
Huyck, Stanhope Pier.....M
Imthun, Edgar F.....M
McLaughlin, C. L. D.....Vermontville
Moyer, H. Allen.....Charlotte
Myers, Albert W.....Potterville
Paine, E. Madison.....Traverse City
Paine, E. M.....Grand Ledge
Quick, Phil H.....Olivet
Sackett, C. S.....Charlotte (Ret.)
Sassaman, F. W.....Charlotte
Sevener, C. J.....M
Sevener, Lester G.....Charlotte
Stanka, Andrew G.....Grand Ledge
Stucky, Geo. C.....Charlotte
Stimson, C. A.....Eaton Rapids
Van Ark, Bert.....M

Genesee County

Adams, Chester .....M
Andrews, N. A. C.....M
Anthony, George E.....M
Bahlman, Gordon H.....Flint
Baird, James .....Flint
Bald, Frederick W.....M
Barbour, Fleming A.....Flint
Baske, Franklin W.....Flint
Bateman, L. G.....M
Benson, J. C.....Flint
Bernstein, Eli N.....M
Biggar, H. R.....Flint
Bishop, D. L.....Flint
Blakeley, A. C.....Flint
Bogart, Leon M.....Flint
Boles, Wm. P.....Flint
Bonathan, A. T.....Flint
Bradley, Robert .....M
Brain, R. G.....Flint
Branch, Hira E.....M
Brasie, Donald E.....Flint
Briggs, Guy D.....Flint
Bruce, Wm. W.....M
Buchanan, W. Fremont.....Fenton
Burkett, L. V.....Flint
Burnell, Max .....Flint
Burnside, Howard B.....M
Chambers, Myrton S.....Flint
Chandler, M. E.....Flint
Charters, John H.....Fenton
Childs, Lloyd H.....Flint
Clark, Clifford P.....Flint
Colwell, C. W.....M
Connell, J. T.....Flint
Conover, G. V.....M
Conover, T. S.....Flint
Cook, Henry .....Flint
Covert, F. L.....Gaines
Crane, Harley C.....Flint
Credille, B. A.....Flint
Curry, George .....Flint
Curtin, J. H.....Flint
David T. George.....Flint
Del Zingro, N.....Davison
Dimond, E. G.....Flint
Dodds, F. E.....Flint
Drewyer, Glen .....M
Edgerton, A. C.....Clio
Eichhorn, Ernest .....Flint
Eickhorst, Thomas N.....M
Elliott, H. B.....New York City
Evers, J. W.....Flint
Farhat, M. M.....M
Finkelstein, T. .....M
Flynn, S. T.....M
Foley, S. I.....Flint
Fuller, H. T.....M
Gelenger, S. M.....M
Gleason, N. Arthur.....Flint
Goering, George R.....Flint
Golden, M. M.....Flint
Goodfellow, B. T.....Flint
Gorne, S. S.....M
Graham, Hugh W.....Mt. Morris
Gray, Edwin F.....M
Grover, H. F.....Flint
Gutow, I.....Flint
Gutow, J. J.....M
Guile, Earle .....Flint
Guile, G. S.....Flint
Gundry, G. L.....Grand Blanc
Hague, R. F.....M
Halligan, R. S.....Flint
Hamady, Ruth B.....Flint
Handy, John W.....Flint
Harper, A. W.....Flint
Harper, Homer .....Flint
Harrison Leo D.....Flint
Hawkins, James E.....Flint
Hays, George A.....M
Hiscock, H. H.....M
Houston, James .....Swartz Creek
Hubbard, Wm. B.....M
Hufton, Wilfred L.....Flint
Jefferson, Harry.....Flint
Johnson, Arthur H.....Flint
Johnson, Frank D.....M
Jones, Lafon .....Flint
Kaleta, Edward .....M
Kaufman, Lewis D.....M
Kirk, A. Dale.....Flint
Knapp, M. S.....Fenton (Ret.)
Kretchmar, A. H.....Flint
Kurtz, J. J.....Flint
Lambert, L. A.....M
Lavin, Kathryn R.....Flint
Leach, J. L.....Flint
Livesay, Jackson E.....Flint
Logan, G. W.....Flushing
MacDuff, R. B.....Flint
MacGregor, D. M.....Flint
MacGregor, James C.....Flint
MacGregor, R. W.....Flint
Macksood, Joseph .....Flint
Marsh, H. L.....Flint
Marshall, William H.....Flint
Mason, Elta .....Flint
Matthewson, Guy C.....Flint
McArthur, A. .....Flint
McArthur, R. H.....M
McGarry, Burton G.....Fenton
McGarry, R. A.....Flint
McKenna, O. W.....Flint
Miller, Edwin E.....Flint
Miller, Loren Eugene.....M
Miltick, Anthony J.....Flint
Miner, Frederick B.....Flint
Moore, James W.....Flint
Moore, Kenneth B.....Flint
Morrish, Ray S.....Flint
Morrissey, V. H.....Flint
Mosier, Edward C.....Otisville
Odle, Ira .....Flint
Olson, James A.....Flint
O'Neil, C. H.....Deckerville
Orr, J. Walter.....Flint
Phillips, R. L.....Flint
Pfeifer, A. C.....Mt. Morris
Pratz, O. C.....Flint
Preston, Otto .....Flint
Probert, C. C.....Flint
Randall, H. E.....Flint
Reeder, Frank E.....Flint
Reid, Wells C.....Goodrich
Reichard, Orill .....Flint
Reynolds, A. J.....Flint
Richeson, V.....Flint
Rieth, George F.....M
Roberts, Floyd A.....Flint
Rowely, James A.....Flint
Rummell, Robert J.....Flint
Rundles, Walter Z.....M
Rynearson, W. J.....Fenton
Sandy, K. R.....M
Scavarda, Charles J.....M
Schiff, B. A.....M
Scott, R. D.....Flint
Shantz, L. O.....Flint
Sleeman, Blythe R.....Linden
Sheeran, Daniel H.....Flint
Shipman, Charles W.....Flint
Smith, E. C.....Flint
Smith, Maurice J.....M
Sniderman, Benjamin .....M
Snyder, Charles E.....M
Sorkin, S. S.....M
Steinman, F. H.....M
Stephenson, Robert A.....Flint
Stevenson, W. W.....Flint
Streat, R. W.....Flint
Stroup, C. K.....Flint
Sutherland, James K.....Flint
Sutton, George.....Flint
Sutton, M. R.....Flint
Thompson, Alvin .....Flint
Tofteland, Elmer H.....M
Treat, D. L.....Flint
Trumble, G. W.....Flint
Van Gorder, George.....M
Vary, Edwin P.....M
Walcott, C. G.....M
Walden, C. E.....Howell
Ward, Nell .....Flint
Wark, D. R.....Flint
White, Carl H.....M
White, Herbert .....Flint
White, Perry .....Clio
Williams, W. S.....Flint
Willoughby, G. L.....M
Willoughby, L. L.....Flint
Wills, T. N.....Flint
Wilson, Wm. K.....Grand Blanc
Winchester, Walter H.....Flint
Woughter, Harold W.....M
Wright, D. R.....Flint
Wright, G. R.....Montrose
Wyman, J. S.....Flint

Gogebic County

Anderson, Charles E.....Bessemer
Eisele, D. C.....Ironwood
Gertz, M. A.....Ironwood
Gorrilla, A. C.....Ironwood
Gullison, Miles .....M
Hendrickson, A. O.....Ironwood
Holm, Henry .....Ironwood
Lieberthal, M. J.....Ironwood
Lieberthal, Paul .....Ironwood
Maccani, Wm. L.....Ironwood
Maloney, F. G. H.....Ironwood
Nezworski, H. T.....Ramsey
O'Brien, A. J.....Ironwood
Pierpont, D. C.....Ironwood
Pinkerton, H. A.....M
Reynolds, F. L. S.....Ironwood
Stevens, Charles E.....Ironwood
Tew, Wm. Ellwood.....Bessemer
Tressel, H. A.....Wakefield
Urquhart, C. C.....Ironwood
Wacek, W. H.....Ironwood

Grand Traverse-Leelanau-Benzie Counties

Baumann, Milton C.....M
Bolan, Ellis J.....Suttons Bay
Brownson, Jay J.....Kingsley
Brownson, Kneale M.....M
Bushong, B. B.....Traverse City
Covey, E. L.....Honor
Ellis, Claude I.....Suttons Bay
Gauntlett, J. W.....Traverse City
Goodrich, Dwight .....Traverse City
Grawn, F. A.....Traverse City
Hamilton, Earl E.....M
Huston, Russell R.....Elk Rapids
Hyslop, Wm. T.....Traverse City
Jerome, Jerome T.....Traverse City
Kitson, V. H.....Elk Rapids
Knapp, Joseph L.....M
Kyselka, H. B.....Traverse City
Lemen, Charles E.....M
Lentz, R. J.....M
Lossman, R. T.....Traverse City
Murphy, Fred E.....Cedar
Nickels, M. M.....Traverse City
Osterlin, Mark .....Traverse City
Rinear, Edwin .....Traverse City
Sheets, R. Philip.....Traverse City
Sladek, E. F.....Traverse City
Stone, Fordyce H.....Beulah
Swanton, L. .....Traverse City
Swartz, F. G.....Traverse City
Thacker, Fred R.....Frankfort
Thirlby, E. L.....Traverse City
Thompson, T. W.....Traverse City
Trautman, Frederick B.....M
Van Leuven, B. H.....Frankfort
Way, Lewis R.....M
Weitz, Harry .....Traverse City
Wilcox, Paul H.....Traverse City
Willard, Wm. G.....Benzonia
Willoughby, Frances Lois.Traverse City
Zielke, I. H.....M
Zimmerman, J. G.....M

Gratiot-Isabella-Clare Counties

Aldrich, Alfred L.....Ithaca
Barstow, D. K.....M
Barstow, Wm. E.....St. Louis
Baskerville, C. M.....Mt. Pleasant
Becker, Myron G.....Edmore
Budge, M. J.....Ithaca
Burch, L. J.....Mt. Pleasant
Burt, C. E.....Ithaca
Carney, T. J.....Alma
Dale, Edward C.....M
Davis, L. L.....M
Drake, Wilkie M.....Breckenridge
DuBois, C. F.....Alma
Graham, B. J.....M
Hall, B. C.....Pompeii
Hammerberg, Kuno .....M
Harrigan, Wm. L.....Mt. Pleasant
Hersee, Wm. E.....M
Hobbs, A. D.....St. Louis
Howe, Leslie A.....Breckenridge
Hyslop, Leland F.....Mt. Pleasant
Kilborn, H. F.....Ithaca
Lamb, E. T.....Alma
McArthur, Stewart C.....Clare
Miller, S. W.....M
Oldham, E. S.....M
Putzig, Louis W.....Blanchard
Rondot, E. F.....Lake
Rottschafer, J. L.....M
Sanford, B. J.....Clare
Sharon, J. P.....Mt. Pleasant
Silvert, P. P.....Vestaburg
Slattery, F. G.....M
Strange, Russell H.....Mt. Pleasant
Waggoner, R. L.....St. Louis
Wilcox, R. A.....Alma
Wilson, Earl C.....Harrison
Wolfe, Kenneth P.....M
Wood, Cornelius B.....M

Hillsdale County

Allegar, W. E.....Pittsford
Bower, Charles T.....Hillsdale
Clobridge, C. E.....Allen
Davis, L. A.....Montgomery
Day, Luther W.....Jonesville
Douglas, E. W.....Hillsdale
Fisk, Fred B.....Jonesville
Green, B. F.....Hillsdale
Hamilton, A. J.....Hillsdale
Hanke, George R.....Ransom
Hodge, C. L.....Reading
Hughes, Henry F.....Hillsdale
Johnson, C. E.....M
Kinzel, R. W.....M
MacNeal, John A.....Hillsdale
Martindale, E. A.....Hillsdale
Mattson, H. F.....M
Miller, Harry C.....Hillsdale
Moench, G. F.....Hillsdale
Poppen, C. J.....Reading
Sandor, A. A.....M
Sawyer, Walter W.....M
Sterling, John S.....Jerome
Strom, A. W.....M

Houghton-Baraga-Keweenaw Counties

Abrams, James C.....Calumet
Acocks, J. R.....M
Aldrich, A. B.....Houghton
Aldrich, Addison D.....Houghton
Aldrich, Leonard .....M
Bourland, Philip D.....Calumet
Brewington, George F.....Mohawk
Coffin, Leslie E.....Painesdale
Cooper, C. A.....Hancock
Gregg, W. T. S.....Calumet
Hillmer, R. E.....Beacon Hill
Janis, A. J.....Hancock
Kadin, Maurice .....M
King, Wm. T.....Ahmeek
Kirton, Joseph R. W.....Calumet
Kolb, F. E.....M
LaBine, Alfred .....Houghton
Levin, Simon .....Houghton
MacQueen, Donald K.....Laurium
Manthei, W. A.....Lake Linden
Marshall, Frank F.....L'Anse
McClure, Robert James.....Calumet
Pleune, R. E.....M
Quick, James B.....Laurium
Roche, A. C.....Calumet
Roche, Andrew M.....M
Sarvela, H. L.....Hancock
Scott, Wm. P.....Houghton
Sloan, P. S.....Houghton
Smith, Charles R.....Houghton
Stahr, H. S.....Hancock
Stern, Isadore D.....Houghton
Stewart, J. C. B.....Painesdale
Tinetti, Ernest F.....M
Ware, H. M.....Nahma
Wickliffe, T. P.....Calumet
Winkler, Henry J.....L'Anse

Huron County

Gettel, Roy R.....Kinde
Henderson, J. Bates.....Sebewaing
Herrington, Charles I.....Bad Axe
Herrington, Willet J.....Bad Axe
Holdship, Wm. B.....Ubly
Monroe, Duncan J.....Elkton
Morden, Charles B.....Bad Axe
Oakes, C. W.....Harbor Beach
Ritsema, John .....Sebewaing
Scheurer, C. .....Pigeon
Thumme, Harrison F.....Sebewaing

Ingham County

Albert, Wilford D.....Leslie
Atkinson, Everett H.....E. Lansing
Barrett, C. D.....Mason
Bartholomew, Henry S.....
.....Harbor Beach (Ret.)
Bauer, Theodire I.....Lansing
Behen, Wm. C.....Lansing
Bellinger, E. G.....Lansing
Black, Charles E.....Williamston
Black, Gertrude .....Williamston
Bradford, C. W.....Lansing
Breakey, Robert S.....Lansing
Brown, F. W.....M
Brubaker, Earl .....Lansing
Brucker, Karl B.....Lansing
Bruegel, O. H.....E. Lansing
Burhans, Robert A.....M
Cameron, W. J.....Lansing
Carr, E. I.....Lansing
Christian, L. G.....Lansing
Clark, William E.....M
Clinton, George .....M
Cook, R. J.....Lansing
Cope, H. E.....Lansing
Corneliuson, Goldie B.....Lansing
Corsaut, J. C.....Mason
Cross, Frank S.....Chicago, Ill.
Darling, L. H.....Lansing
Dart, Dorothy .....Mason
Davenport, C. S.....Lansing
Dean, Carleton .....Lansing
Delay, C. P.....Webberville
DeVries, C. F.....Lansing
Doyle, Charles R.....M
Doyle, C. P.....Lansing
Drolett, Donald J.....M
Drolett, Fred J.....Lansing
Drolett, Lawrence .....M
Dunn, F. C.....Lansing
Dunn, F. M.....Lansing
Ellis, Bertha W.....Lansing
Ellis, C. W.....Lansing
Feeney, Kenneth J.....Lansing
Finch, Russell L.....Lansing
Fisher, D. W.....M
Folkers, Leonard M.....E. Lansing
Fosget, Wilbur W.....Lansing
Foust, E. H.....Lansing
French, Horace L.....Lansing
Galbraith, Dugald A.....Lansing
Gardner, C. B.....Lansing
Gibson, T. E.....M
Goldner, R. E.....M
Gunderson, G. O.....Lansing
Heald, Gordon H.....M
Harris, Dean W.....Lansing
Harris, Herbert W.....M
Harrold, J. F.....M
Hart, L. C.....Lansing
Haynes, H. B.....Lansing
Haze, Harry A.....Lansing
Heckert, Frank B.....Lansing
Heckert, J. K.....Lansing
Hendren, Owen .....M
Hermes, Ed. J.....Lansing
Himmelberger, R. J.....M
Hodges, Kenneth P.....M

Holland, Charles P.....E. Lansing
Huggett, Clare C.....Lansing
Hughes, Howard Allen.....
Huntley, Fred M.....Lansing
Hurth, M. S.....Lansing
Johnson, K. H.....M
Jones, Francis A.....Lansing
Jones, Francis, Jr.....Lansing
Kalmbach, R. E.....Lansing
Keim, C. D.....Lansing
Kelly, William H.....M
Kent, Edith Hall.....Lansing
Kent, Herbert K.....Lansing
Kraft, L. C.....Leslie
Lang, R. R.....M
Larrabee, E. E.....Williamston
LeDuc, Don M.....M
Ley, Wilfred .....M
Loree, Maurice C.....Lansing
Lucas, T. A.....Lansing
Ludlum, L. C.....Lansing
Markuson, Kenneth E.....Lansing
Martin, Wayne O.....Lansing
McConnell, E. G.....Lansing (Ret.)
McCorvie, C. Ray.....E. Lansing
McCoy, Earl M.....Grand Lodge
McCrumb, R. R.....Lansing
McElmurry, Leland R.....Lansing
McElmurry, N. K.....Perry
McGillicuddy, Oliver B.....M
McGillicuddy, R. J.....M
McIntyre, J. Earl.....Lansing
McNamara, William E.....Lansing
McPherson, E. G.....Champion
Meade, Wm. H.....M
Mercer, Walter E.....M
Meyer, Hugh R.....Lansing
Miller, H. A.....Lansing
Morrison, C. V.....Lansing
Morrow, R. J.....M
Niles, B. D.....Lansing
O'Sullivan, Gertrude .....Mason
Phillips, H. H.....Lansing
Pinkham, R. A.....Lansing
Ponton, J. .....Mason
Potter, Earl C.....M
Prall, H. J.....Lansing
Randall, O. M.....Lansing
Rector, Frank L.....Lansing
Richards, F. D.....M
Roberts, D. W.....Okemos
Roberts, Russell .....Lansing
Robson, Edmund J.....M
Rozan, J. S.....Lansing
Rozan, M. M.....M
Russell, Claude F.....Lansing (Ret.)
Sander, John F.....M
Sanford, Thomas M.....Lansing
Seger, Fred L.....Lansing
Shaw, Milton .....Lansing
Shepherd, C. S.....Lansing
Sherman, George A.....East Lansing
Sichler, Harper C.....Lansing
Silverman, Irving E.....M
Smith, Anthony V.....Mason
Smith, H. M.....Lansing
Smith, Lillian R.....Lansing
Snell, D. M.....Lansing
Snyder, LeMoyne .....Lansing
Spencer, Perry .....M
Steiner, A. A.....M
Stiles, Frank .....M
Strauss, P. C.....Lansing
Stringer, C. J.....Lansing
Swartz, Frederick C.....M
Tallman, Frank F.....Lansing
Tamblyn, F. W.....M
Thiehoff, E. V.....Lansing
Toothaker, Kenneth .....M
Town, Floyd R.....Lansing
Towne, Lawrence C.....Lansing
Troost, F. L.....Holt
Vander Slice, E. R.....Lansing
Vander Zalm, T. P.....M
Wadley, R. .....Lansing
Warford, T. J.....Lansing
Webb, Roy O.....M
Weinburgh, H. B.....Lansing
Welch, William H.....Lansing
Wellman, John M.....M
Wetzel, John O.....Lansing
Wiley, Harold W.....Lansing
Willson, Howard S.....Lansing
Wilson, Harry A.....Lansing

Ionia-Montcalm Counties

M. Benison, A. L.....M
Bird, Wm. L.....Greenville
Bower, A. J.....Greenville
Bracey, L. E.....Sheridan
Bunce, E. P.....Trufant
Dunkin, Lloyd S.....M
Ferguson, F. H.....Carson City
Fleming, J. C.....Pewamo
Fox, Harold M.....Portland
Geib, O. P.....Carson City
Hansen, M. M.....Greenville
Haskell, Robert J.....Northville
Hay, John R.....Saranac
Hoffs, M. A.....Lake Odessa
Imus, H. L.....Ionia
Johns, Joseph J.....Ionia
Kelsey, L. E.....Lakeview
Kling, V. F.....M
Lilly, I. S.....Stanton
Marsh, F. M.....Ionia
Marston, L. L.....M
McCann, John J.....Ionia.
Mintz, Morris J.....M
Norris, Wm. W.....Portland
Peabody, C. H.....Lake Odessa
Pankhurst, C. T.....Ionia
Phelps, Everett L.....Clarksville
Robertson, P. C.....Ionia
Seidel, Karl E.....M
Slagh, Milton E.....M
Socha, Edmund S.....Ionia
Swift, E. R.....Lakeview
VanDuzen, V. L.....Grand Rapids
VanLoo, J. A.....M
Weaver, Harry B.....Greenville
Whitten, R. R.....Ionia
Willitts, C. O.....Saranac

Jackson County

Adams, Dewitt C.....Jackson
Ahronheim, J. H.....M
Alter, R. H.....Jackson
Anderson, W. B.....Jackson
Appel, S. .....M
Baker, G. M.....Parma
Balconi, Henry .....Jackson
Bartholic, F. W.....M
Beckwith, S. A.....Stockbridge
Brown, H. A.....Jackson
Bullen, G. R.....Jackson
Chabut, H. M.....Jackson
Chivers, E. Q.....Jackson
Clarke, C. S.....Jackson
Cochrane, Wayne A.....Jackson
Cooley, Randall M.....Jackson
Corley, C. .....Jackson
Corley, Ennis .....Jackson
Cox, Ferdinand .....Jackson
Crowley, Edward D.....M
Culver, Guy D.....Stockbridge
DeMay, C. E.....Jackson
Dengler, C. R.....Jackson
Edmunds, J. M.....M
Enders, W. H.....Jackson
Finton, Walter L.....Jackson
Finton, W. R. .....M
Foust, W. L.....Grass Lake
Gibson, F. J.....Jackson
Glover, H. G.....Jackson
Gordon, D. L.....M
Greenbaum, Harry .....M
Hackett. T. E.....Jackson
Hanft, Cyril F.....Springport
Hanna, R. J.....M
Hardie, G. C.....Jackson
Harris, L. J.....Jackson
Hart, H. .....Jackson
Hicks, Glenn C.....Jackson
Holst, John B.....M
Huntley, W. B.....Jackson
Hurley, H. L.....Jackson
Keefer, A. H.....Concord
Kudner, Don F.....Jackson
Lake, Wm. H.....M
Lathrop, Wm. W.....Jackson
La Victoire, Isaac N.....M
Leahy, E. O.....Jackson
Lenz, C. R.....M
Leonard, Clyde A.....Jackson
Lewis, E. F.....Jackson
Lojacono, Salvatore .....Jackson
Ludwick, J. E.....M
McGarvey, W. E.....Jackson
McLaughlin, M. J.....Jackson
McLauthlin, Herbert B.....M
Meads, J. B.....Jackson
Miller, J. L.....M
Munro, C. D.....Jackson
Munro, James E.....Jackson
Murphy, B. M.....M
Newton, R. E.....Jackson
O'Meara, James J.....Jackson
Oleksy, S. .....Jackson
Otis, Grant L.....M
Payne, Andrew K.....Jackson
Phillips, George H.....Jackson
Porter, H. W.....Jackson
Peterson, E. S.....Sarasota, Fla. (Ret.)
Pray, Frank F.....Jackson
Pray, George R.....Jackson
Ransom, F. G.....Jackson
Riley, Philip A.....Jackson
Roberts, Arthur J.....Jackson
Rutz, Lawrence M.....Jackson
Schepeler, Cortland W.....Brooklyn
Scheurer, Peter A.....Manchester
Schmidt, T. E.....Jackson
Scott, John A.....M
Seybold, Edward G.....M
Schaeffer, A. M.....Jackson
Sirhal, Alfred M.....M
Smith, Dean W.....Jackson
Speck, John W.....Jackson
Southwick, W. A.....M
Stewart, L. L.....Jackson
Sugar, Samuel .....M
Susskind, M. V.....M
Tate, Cecil E.....M
Thayer, E. A.....Jackson
Thalner, L. F.....Jackson
Townsend, J. W.....Vandercook Lake
Tuthill, F. S.....Concord
VanSchoick, J. D.....Hanover
VanSchoick, Frank .....Jackson
Vivirski, Edward E.....M
Wertenberger, M. D.....Jackson
Wholihan, John W.....Michigan Center
Wickham, W. A.....M
Wilson, E. G.....Jackson
Wilson, N. D.....Jackson
Winter, G. E.....Jackson
Woodward, George D.....Jackson

Kalamazoo County

Aach, Hugo.....M
Adams, R. U.....Kalamazoo
Alexander, F. A.....Kalamazoo
Andrews, Sherman.....M
Armstrong, Robert J.....Kalamazoo
Banner, Lawrence R.....Kalamazoo
Barnebee, J. W.....Kalamazoo
Barrett, F. Elizabeth.....Kalamazoo
Behan, Gerald W.....Galesburg
Bennett, Charles L.....Kalamazoo
Bennett, Keith.....M
Berry, J. F.....Kalamazoo
Bodmer, H. C.....Kalamazoo
Borgman, Wallace.....M
Boys, C. E.....Kalamazoo
Brooks, Ervin D.....Kalamazoo
Brown, I. W.....Kalamazoo
Burns, J. T.....Kalamazoo
Caldwell, Geo. H.....Kalamazoo
Cobb, Horace R.....Kalamazoo
Cook, R. G.....Kalamazoo
Crane, W. G.....M
Crawford, Kenneth.....M
Dahlstrom, Doris.....Kalamazoo
DenBleyker, Walter.....Kalamazoo
DeWitt, L. H.....Kalamazoo
Dowd, B. J.....M
Doyle, F. M.....M
Ertell, Wm. Francis.....Kalamazoo
Fast, R. B.....Kalamazoo
Fopeano, John V.....M
Fulkerson, C. B.....Kalamazoo
Fuller, R. T.....M
Gerstner, Louis.....Kalamazoo
Gilding, Joseph .....M
Glenn, Audrey.....Ft. Wayne, Ind.
Grant, Frederick E.....Kalamazoo
Gregg, Sherman.....Kalamazoo
Harter, Rudolph S.....Schoolcraft

Heersma, H. S.....Kalamazoo
Hildreth, R. C.....Kalamazoo
Hobbs, Edw. J.....Galesburg
Hodgman, Albert B.....M
Hoebeke, William G.....Kalamazoo
Holder, Charles.....M
Howard, W. H.....Galesburg
Hubbell, R. J.....Kalamazoo
Huyser, William C.....Kalamazoo
Ilgenfritz, F. M.....Kalamazoo
Irwin, William D.....M
Jackson, Howard C.....M
Jackson, John B.....Kalamazoo
Jennings, W. O.....Kalamazoo
Kavanaugh, Wm. R.....M
Kenzie, W. N.....Battle Creek
Klerk, W. J.....M
Koestner, Paul.....M
Kuhs, Milton L.....Kalamazoo
Lambert, R. H.....Kalamazoo
Lang, W. W.....Kalamazoo
Lavender, Howard .....Kalamazoo
Light, Richard U.....Kalamazoo
Light, S. Rudolph.....Kalamazoo
Littig, John.....Kalamazoo

MacGregor, J. R.....M
Malone, James G.....M
Marshall, Don .....M
McCarthy, J. S.....Kalamazoo
McIntyre, Charles H.....M
Moe, Carl Rex.....M
Morter, Roy A.....Kalamazoo
Nell, Edward R.....M
Nibbelink, Benjamin .....Kalamazoo
Nystrom, Ruth .....Kalamazoo
Okun, M. H.....M
Osborne, Charles E.....M
Patmos, Martin .....M
Peelen, J. W.....M
Peelen, Matthew .....M
Perry, Clifton .....Kalamazoo
Prentice, Hazel R.....Kalamazoo
Pullon, A. E.....Kalamazoo
Righterink, G. H.....M
Righterink, H. A.....Kalamazoo
Rockwell, Donald C.....Kalamazoo
Ryan, F. C.....M
Sage, E. D.....Vicksburg
Scholten, D. J.....Kalamazoo
Scholten, Wm. .....Kalamazoo

Schrier, C. M.....M
Schrier, Paul .....M
Schrier, Thomas .....M
Scott, Wm. A.....M
Shackleton, Wm. E.....Kalamazoo
Shepard, Benjamin A.....Oshtemo
Shook, R. W.....M
Simpson, B. W.....Kalamazoo
Snyder, Roscoe F.....Kalamazoo
Sofen, Morris B.....M
Southworth, M. N.....M
Stryker, Homer H.....Kalamazoo
Upjohn, E. Gifford.....Kalamazoo
Upjohn, L. N.....Kalamazoo

Van Urk, Thomas.....Kalamazoo
Verhage, Martin D.....M
Volderauer, John C.....M

Wagar, Carl .....M
Wagenaar, E. H.....M
Walker, Burt D.....Kalamazoo
Westcott, L. E.....Kalamazoo
Wilbur, E. P.....Kalamazoo

Youngs, A. S.....Kalamazoo
Youngs, C. A.....Kalamazoo

Kent County

Adams, F. A.....M
Aitken, George T.....M
Alexander, Marshall O...Grand Rapids
Alfenito, Felix S.....M
Allen, R. V.....Grand Rapids

Bachman, G. A.....Grand Rapids
Baert, Geo. H.....Grand Rapids
Baker, Abel J.....Grand Rapids
Ballard, M. S.....Grand Rapids
Balyeat, Gordon W.....M
Barber, Clarence H.....Grand Rapids
Batts, Martin .....M
Beaton, James H.....M
Beeman, Carl B.....M
Beeman, C. E.....Grand Rapids
Beets, W. Clarence.....M
Bell, Charles M.....M
Bettison, Wm. L.....M
Billings, Elton P.....Grand Rapids
Blackburn, Henry M....Grand Rapids
Bloxsom, Paul W.....Grand Rapids
Boelkins, Richard C.....M
Boet, F. A.....Grand Rapids
Boet, John .....M
Bond, Geo. Lewis.....Grand Rapids
Bosch, L. C.....Grand Rapids
Brace, Fred .....M
Brayman, C. W.....Cedar Springs
Brink, Russell .....M
Brook, Jacob D.....Grandville
Brotherhood, J. S.....Grand Rapids
Browning, Eugene S....Grand Rapids
Buesing, O. R.....M
Buist, S. J.....Grand Rapids
Bull, Frank L.....Sparta
Burleson, John S.....Grand Rapids
Burling, Wesley M.....Grand Rapids
Butler, Wm. J.....Grand Rapids
Byers, Earl J.....Grand Rapids
Byrd, Mary Lou.....Grand Rapids

Campbell, Alexander M...Grand Rapids
Carpenter, Luther C.....M
Chadwick, W. L.....M
Chamberlain, L. H.....Grand Rapids
Chandler, Donald .....Grand Rapids
Claytor, R. W.....Grand Rapids
Collisi, Harrison S.....M
Colvin, W. G.....M
Cosgrove, Wm. J.....M
Crane, Charles V.....Grand Rapids
Crane, Harold D.....M
Cuncannan, M. E.....Grand Rapids
Currier, F. P.....Grand Rapids

Dales, Ernest W.....Grand Rapids
Damstra, H. J.....M
Davis, D. B.....M
Dean, Alfred W.....Grand Rapids
De Boer, Guy Wm.....M
Dell, E. E.....Sand Lake
DeMaagd, Gerald .....Rockford
DeMol, Richard J.....Grand Rapids
Denham, R. H.....Grand Rapids
DePree, Isla G.....Grand Rapids
DePree, Joseph .....Grand Rapids
DeVel, Leon .....M
DeVries, Daniel .....Grand Rapids
Dewar, M. M.....Grand Rapids
Dick, Mark W.....M
Dixon, Willis L.....Grand Rapids
Doran, Frank L.....Grand Rapids
Droste, James C.....Grand Rapids
DuBois, Wm. J.....Grand Rapids
Duiker, Henry .....Grand Rapids
Eaton, Robert M.....M
Eggleston, H. R.....Grand Rapids

Elliott, James A.....Grand Rapids
Failing, John F.....M
Farber, Charles E.....M
Faust, L. W.....Grand Rapids
Fee, Manson G.....M
Fellows, Kenneth E.....M
Ferguson, James .....M
Ferguson, Lynn A.....Grand Rapids
Ferguson, Ward S.....Grand Rapids
Ferrand, L. .....M
Fitts, Ralph L.....M
Flynn, J. D.....M
Foshee, J. C.....Grand Rapids
Frantz, Chas. H.....M
Freyling, Robert H.....M
Fuller, E. H.....Grand Rapids
Gaikema, E. W.....Grand Rapids
Geenan, C. J.....Grand Rapids
Gibbs, F. F.....Grand Rapids
Gilbert, R. H.....Grand Rapids
Gillett, O. H.....Grand Rapids
Grant, Lee O.....Grand Rapids
Graybiel, George P.....Caledonia
Griffith, L. S.....M
Hagerman, D. B.....Grand Rapids
Hammond, T. W..(Ret.) Grand Rapids
Hardy, Faith F.....Grand Rapids
Hayes, L. W.....Howard City
Heetderks, Dewey.....Grand Rapids
Henry, James, Jr.....Grand Rapids
Herrick, Ruth .....Grand Rapids
Hill, A. Morgan.....M
Hilt, Lawrence M.....M
Hodgen, J. T.....Grand Rapids
Hoeck, William .....M
Holcomb, J. W.....Grand Rapids
Holdsworth, M. J.....M
Holkeboer, Henry D.....Grand Rapids
Hollander, Stephen .....M
Hoogerhyde, Jack .....M
Houghton, G. D.....Caledonia
Hufford, A. R.....Grand Rapids
Hunderman, Edward ....Grand Rapids
Hutchinson, Robert J....Grand Rapids
Hyland, Wm. A.....Grand Rapids
Ingersoll, C. F.....M
Irwin, Thomas C.....Grand Rapids
Jameson, Fred M.....M
Jaracz, W. J.....Grand Rapids
Jarvis, Charles .....Grand Rapids

Kelly, Robert E.....M
Kemmer, Thomas R.....Grand Rapids
Kendall, Eugene L.....Grand Rapids
Klaus, C. D.....M
Kniskern, P. W.....M
Kooistra, Henry P.....Grand Rapids
Kremer, John .....Grand Rapids
Kreulen, H. J.....Grand Rapids
Kriekard, P. J.....Grand Rapids
Krupp, C. G.....Grand Rapids

Lamb, George F.....Grand Rapids
Lanning, N. E.....Grand Rapids
Lanting, D. B.....Grand Rapids
Lavan, John .....M
Lawrence, Howard C....Grand Rapids
Lentini, Joseph R.....M
Le Roy, Simeon.....Grand Rapids
Lieffers, Harry .....Grand Rapids
Logie, James W.....Grand Rapids
Lyman, William D.....Grand Rapids

McCandless, Robert ....Grand Rapids
MacDonald, Allan .....M
MacDonell, James A.....Lowell
Marrin, M. M.....M
Marsh, John P.....Grand Rapids

McDougall, Clarice.....Grand Rapids
McKenna, J. L.....M
McKinlay, L. M.....Grand Rapids
McRae, John H.....Grand Rapids
Meengs, Jacob Earl.....Grand Rapids
Mehny, Gayle.....Grand Rapids
Miller, J. Duane.....M
Miller, John J.....Marne
Mitchell, H. C.....M
Mitchell, W. B.....Grand Rapids
Moen, Cornetta G.....Grand Rapids
Moleski, Leo .....M
Moleski, Stanley L.....Grand Rapids
Moll, Arthur M.....Grand Rapids
Mollman, Arthur.....Grand Rapids
Moore, Vernor M.....Grand Rapids
Mouw, Richard .....M
Mulder, J. D.....Grand Rapids
Murphy, M. J.....M
Nelson, A. R.....M
Noordewier, Albert.....Grand Rapids
Northouse, Peter B.....Grand Rapids
Northrup, Wm. .....Ionia
Oliver, W. W.....Grand Rapids
Osborn, Howard .....Grand Rapids
Paalman, Russell J.....Grand Rapids
Patterson, P. Wilfred... GrandRapids
Payne, C. Allen.....M
Pedden, J. R., Jr.....Grand Rapids
Phillips, J. W.....Grand Rapids
Pyle, Henry J.....Grtnd Rapids

Ragsdale, L. V.....Grand Rapids
Ralph, L. Paul.....M
Reed, Torrance .....Grand Rapids
Reus, Wm. F.....Jamestown
Rigterink, J. W.....Grand Rapids
Riley, G. L.....Grand Rapids
Roberts, Mortimer E.....Grand Rapids
Robinson, Harold C.....Grand Rapids
Rodgers, W. L.....Grand Rapids
Rogers, John R.....Grand Rapids
Roth, Emil M.....M

Schermerhorn, L. J.....Grand Rapids
Schuitema, Donald .....M
Schnoor, E. W.....Grand Rapids
Schnute, Louise F.....Grand Rapids
Scully, Raymond E.....M
Sevensma, Elisha S.....Grand Rapids
Sevey, L. E.....Grand Rapids
Shepard, B. H.....Lowell
Shellman, Millard W.....M
Slemons, C. C.....Grand Rapids
Sluyter J. S.....M
Smith, A. B.....Grand Rapids
Smith, Edwin M.....Grand Rapids
Smith, Ferris N.....Grand Rapids
Smith, R. Earle.....Grand Rapids
Snapp, Carl F.....Grand Rapids
Snyder, Clarence .....Grand Rapids
Southwick, G. Howard..Grand Rapids
Steffensen, W. H.....M
Stonehouse, G. G.....Grand Rapids
Stover, Virgil E.....M
Stuart, Gerhardus J.....Grand Rapids
Sugg, Cullen E.....Grand Rapids
Swenson, H. C.....M

Ten Have, J.....Grand Rapids
Tesseine, A. J.....M
Teusink, J. H.....Cedar Springs
Thompson, Archibald B..Grand Rapids
Thompson, Athol B.....Grand Rapids
Thompson, P. L.....Grand Rapids
Tidey, Marcus B.....Grand Rapids
Tiffany, Jos. G.....Grand Rapids
Torgerson, Wm. R.....Grand Rapids

Van Belois, Harvard J...Grand Rapids
Van Bree, R. S.....Grand Rapids
Vanden Berg, Henry J..Grand Rapids
Vander Meer, Ray .....M
VanDuine, H. J.....Byron Center
Vann, N. S.....Grand Rapids
Van Noord, Gelmer A...Grand Rapids
Van Solkema, Andrew..Grand Rapids
Van Solkema, Arthur.....M
Van Woerkom, Daniel...Grand Rapids
Van Zwaluwenberg, Benjamin....
Grand Rapids
Veldman, Harold E.....Grand Rapids
Veenboer, Wm. H.....Grand Rapids
Venema, J. R.....Grand Rapids
Vis, Wm. R.....Grand Rapids
Vyn, J. D.....Grand Rapids
Warnshuis, Frederick C.....
Windsor, Ontario
Webb, Rowland.....Grand Rapids
Webber, Jerome E.....M
Wedgewood, L. G.....Grandville
Wells, Merrill .....Grand Rapids
Wenger, Aaron V.....Grand Rapids
Wenger, John N.....Coopersville
Whalen, John .....M
Whinery, Joseph B.....Grand Rapids
Wiggers, J. R.....Grand Rapids
Willits, P. W.....Grand Rapids
Wilson, Wm. E...Grand Rapids (Ret.)
Winfield, Emery D.....Grand Rapids
Winter, Garrett E.....Grand Rapids
Woodburne, A. R.....M
Wright, John M.....Grand Rapids
Wright, Thomas B.....Grand Rapids
Yegge, J. P.....Kent City

Lapeer County

Best, Herbert M.....Lapeer
Bishop, G. C.....Almont
Burley, David H.....Almont
Chapin, Clarence D.....Columbiaville
Dorland, Clarke .....M
Jackson, Carl C.....M
McBride, J. R.....M
McLeod, K. W. A.....Lapeer
Merz, Henry G.....Lapeer
O'Brien, Daniel J.....Lapeer
Smith, G. L.....Imlay City
Thomas, J. Orville.....North Branch
Tinker, F. A.....Lapeer
Zemmer, H. B.....Lapeer

Lenawee County

Abraham, A. O.....Hudson
Blanchard, L. E.....Hudson
Bland, J. P.....Adrian
Blanden, Merwin R.....Tecumseh
Campbell, C. A.....M
Claflin, G. M.....Adrian
Clark, A. D.....Adrian
Claxton, W. T.....M
Colbath, W. E.....Adrian
Growth, Bowers H.....Addison
Hall, George C.....M
Hambly, S. B.....Tipton
Hammel, H. H.....M
Hardy, P. B.....Tecumseh
Heffron, Howard H.....Adrian
Helzerman, Ralph F.....M
Hewes, A. B.....Adrian
Hornsby, W. B.....Clinton
Howland, F. A.....Adrian
Iler, Harris D.....M
Jewett, Wm. E., Jr.....Adrian
Lamley, Arthur E.....Blissfield
Loveland, Horace H.....Tecumseh
MacKenzie, W. S.....Adrian
McCue, Francis J., Jr.....M
Marsh, R. G. B.....M
Miller, Perry Lynford.....M
Morden, Esli T.....Adrian
Pasternacki, Arthur S.....M
Patmos, Bernard .....M
Peters, W. L.....Morenci
Raabe, E. C.....Morenci
Rawson, A. P.....M
Rogers, J. D.....M
Spalding, I. L.....Hudson
Stafford, Leo J.....Adrian
Tubbs, R. V.....Blissfield
Van Dusen, C. A.....Blissfield
Wood, A. C.....Adrian
Wynn, G. H.....M

Livingston County

Brigham, Jeanette .....Howell
Cameron, Duncan A.....M
Coughlin, Florence J.....Howell
Crandell, Claire .....Howell
Duffy, Ray M.....Pinckney
Finch, E. D.....Howell
Gamble, Shelby G.....M
Glenn, Bernard H.....Fowlerville
Hayner, R. A.....M
Hendren, J. J.....Fowlerville
Hill, Harold C.....M
Huntington, H. G.....Howell
Laboe, Edward W.....Howell
Leslie, G. L.....M
McGregor, Archie J.....Brighton
McDowell, Guy Marshall.....Howell
Sigler, Hollis L.....Howell
Stephens, D. C.....M

Luce County

Bohn, Frank P.....Newberry
Campbell, Earl H.....Newberry
Franklin, Sidney .....Newberry
Gibson, Robert E.....Newberry
Lance, Paul E.....M
Perry, Henry E.....Newberry
Purmort, Wm. R., Jr.....Newberry
Rehn, Adolph T.....Newberry
Spinks, Robert Earl.....Newberry
Surrell, Mathew A.....M
Swanson, George F.....M
Toms, Chas. B.....Newberry

Macomb County

Abbis, Frederick J.....Romeo
Banting, O. F.....Richmond
Berry, Henry G.....Mt. Clemens
Bower, A. B.....Armada
Brady, Milo J.....St. Clair Shores
Caster, E. Wilbur.....Mt. Clemens
Crawford, A. M.....Romeo
Croman, Joseph M., Jr...Mt. Clemens
Dudzinski, Edmund J.....M
Fluemer, Oswald .....Mt Clemens
Hawley, R. E.....St. Clair Shores
Kane, Wm. J.....Mt. Clemens
La Reviere, J. O.....Mt. Clemens
Moore, G. F.....Mt. Clemens
Reichman, Joseph J.....M
Rivard, Charles L.....M
Roth, G. E.....M
Ruedisueli, C. A.....East Detroit
Salot, R. F.....M
Siegfried, E. G.....New Haven
Stone, Elizabeth .....Romeo
Thompson, A. A.....Mt. Clemens
Ullrich, R. W.....Mt. Clemens
Wellard, Henry C.....M
Whitley, Alec.....St. Clair Shores
Wilde, M. M.....Warren
Wiley, D. Bruce.....Utica
Wiley, Herbert H.....Utica
Wolfson, Victor H.....Mt. Clemens

Manistee County

Bryan, Kathryn M.....Manistee
Grant, C. L.....Manistee
Hansen, E. C.....M
Konopa, John F.....M
Lewis, Lee A.....Manistee
MacMullen, Harlen .....Manistee
Miller, E. B.....Manistee
Norconk, Ward H.....Bear Lake
Oakes, Ellery A.....Manistee
Ogilvie, G. D.....M
Quinn, Henry M.....Copemish
Ramsdell, Homer A.....Manistee
Switzer, Lars W.....Flint

Marquette-Alger Counties

Bennett, Arthur K.....Marquette
Berry, Robert F.....Marquette
Bertucci, J. P.....M
Bottum, Charles N.....Marquette
Borke, R. A.....Palmer
Casler, W. L.....Marquette
Cooperstock, M.....Marquette
Corcoran, W. A.....Ishpeming
Drury, Chas. P.....Marquette
Elzinga, E. R.....Marquette
Erickson, Arvid W.....Ishpeming
Fennig, F. A.....M
Hanelin, H. A.....M
Hartt, P. P.....Ishpeming
Hornbogen, D. P.....M
Janes, R. Grant.....M
Keskey, George I.....Marquette
Lambert, W. C.....M
LeGolvan, C. .....Marquette
McCann, Neal J.....Ishpeming
Mudge, W. A.....Negaunee
Nicholson, J. B.....M
Niemi, O. I.....M
Picotte, Wilfred S.....Ishpeming
Robbins, Nelson J.....Negaunee
Sarven, James D.....Negaunee
Schutz, W. J.....M
Sicotte, Isaiah .....Michigamme
Swinton, A. L.....Marquette
Talso, Jacob .....Ishpeming
Vanteventer, Vivian H.....Ishpeming
Van Riper, Paul.....Champion
Waldie, George McLeod....Ishpeming
Wickstrom, George .....Munising
Witters, Josef E.....Gwinn

Mason County

Benjamin, Clayton C.....Ludington
Blanchette, Victor J.....Scottville
Comodo, Nicholas M.....M
Force, Wm. H.....Ludington
Goulet, L. J.....Ludington
Hoffman, H. E.....M
Hoffman, Howard .....Ludington
Hunt, Ivan L.....Scottville
Kirwan, Edward J.....Ludington
Martin, Wm. S.....Ludington
Ostrander, R. A.....M
Paukstis, Charles .....Ludington
Spencer, C. M.....Scottville

Mecosta-Osceola-Lake Counties

Bruggema, Jacob .....Evart
Campbell, James B.....Big Rapids
Chess, Leo F.....Reed City
Franklin, Benjamin L.....Remus
Hall, Clifton.....Big Rapids
Ivkovich, Paul .....M
Kilmer, Paul B.....Reed City
Klein, J. Paul.....M
McGrath, V. J.....Reed City
MacIntyre, Donald.....Big Rapids
Merlo, F. A.....Big Rapids
Peck, Louis K.....Barryton
Phillips, R. W.....M
Treynor, Thomas P.....Big Rapids
White, J. A.....Morley
Yeo, Gordon H.....Big Rapids

Medical Society of North Central Counties

Beebe, R. J.....West Branch
Clippert, C. G.....Grayling
Coulter, Keith D.....Gladwin
Drescher, Geo. A.....Lewiston
Egle, Joseph L.....Gaylord
Harris, Levi A.....Gaylord
Hendricks, Henning V.....Kalkaska
Jardine, Hugh M.....West Branch
Keyport, C. R.....Grayling
Lanting, Roelof .....M
LaPorte, L. A.....Gladwin
Martzowka, M. A.....Roscommon
McDowell, Douglas A.....M
McKillop, G. L.....Gaylord
Peckham, Richard .....Gaylord
Sargent, Leland E.....Kalkaska
Stealy, Stanley .....Grayling

Menominee County

Corkill, C. C.....Menominee
DeWane, F. J.....M
Flanagan, Clarence B.....Menominee
Heidenreich, John R.....M
Jones, Wm. S.....Menominee
Kaye, J. T.....Menominee
Kerwell, K. C.....Stephenson
Mason, Stephen C.....Menominee
Peterson, A. R.....Daggett
Sawbridge, Edward .....Stephenson
Sethney, Henry T.....Menominee
Sethney, Walter F.....M
Towey, J. W.....Powers

Midland County

Ballmer, Robert S.....Midland
Gay, Harold H.....Midland
Grewe, N. C.....Midland
High, C. V., Jr.....Midland
Howe, Irvin M.....Midland
Linsenmann, Karl W.....Midland
MacCallum, Charles .....Midland
Maynard, W. A.....Coleman
Meisel, Edward H.....M
Pike, Melvin H.....Midland
Rice, Robert E.....Midland
Sachs, Ralph Robert.....Midland
Sherk, J. H.....Midland
Sjolander, Gust .....Monroe
Towsley, W. D.....Midland
Von Haitinger, Kalmon S.....M

Monroe County

Acker, Wm. F.....Monroe
Ames, Florence .....Monroe
Balk, A. C.....Monroe
Barker, Vincent L.....M
Blakey, L. C.....Monroe
Bond, W. W.....Monroe
Cohen, H. Herbert.....M
Denman, D. C.....M
Dusseau, S. V.....Erie
Ewing, R. T.....Monroe
Fieldhouse, B. J.....Ida
Flanders, J. P.....M
Gelhouse, Wm. J.....Monroe
Golinvaux, C. J.....Monroe
Goodman, Louis .....M
Heffernan, John F.....Carleton
Hensel, Hilda .....Monroe
Heustis, Albert E.....Monroe
Hunter, M. A.....M
Johnson, A. Esther.....Monroe
Landon, Herbert W.....Monroe
Long, Edgar C.....M
Long, Sara .....Monroe
McDonald, T. A.....Monroe
McGeoch, R. W.....Monroe
McMillin, J. H.....Monroe
Meck, H. L.....Dundee
Moreley, Louise .....Erie
Parmerlee, O. E.....Lambertville
Penzotti, Stanley .....M
Pinkus, Hermann .....Monroe
Reisig, A. H.....M
Sanger, Emerson J.....Monroe
Siffer, J. J.....Monroe
Smith, Wm. A.....Petersburg
Stolpestad, C. T.....M
Wagar, Spencer .....Rockwood
Williams, Robert J.....M
Williamson, George W.....Dundee

Muskegon County

Anderson, A. J.....Muskegon
August, R. V.....Muskegon Heights
Bartlett, F. H.....Muskegon
Barnard, Helen .....Muskegon
Beers, Charles.....Muskegon Heights
Benedict, A. L.....M
Bloom, C. J.....Muskegon
Boyd, D. R.....Muskegon
Bradshaw, Park S.....Muskegon
Chapin, William S...Muskegon Heights
Closz, H. F.....Muskegon
Cohan, Sol G.....Muskegon
Colignon, C. M.....Muskegon
Collier, C. C.....Whitehall
D'Alcorn, Ernest .....Muskegon
Dasler, A. F.....M
Derezinski, Clement F.....M
Diskin, Frank .....M
Douglas, Robert .....M
Durham, C. J.....Muskegon
Dykhuisen, Harold D.....Muskegon
Eckerman, C. T.....Muskegon
Fillingham, Enid .....Muskegon
Fleischman, C. B.....Muskegon
Fleishman, Norman .....M
Foss, Edward O.....Muskegon
Garber, F. W., Jr.....Muskegon
Garland, J. O.....Muskegon
Gillard, James .....M
Goltz, Martha H.....Montague
Griffith, Robert M.....M
Hagen, William A.....Muskegon
Hannum, F. W.....Muskegon
Harrington, A. F.....Muskegon
Harrington, R. J.....Muskegon
Hartwell, S. W.....M
Heneveld, John .....Muskegon
Holly, Leland E.....Muskegon
Holmes, Roy H.....M
Jackson, S. A.....Muskegon
Kane, Thomas J.....M
Keilin, Marie .....Muskegon
Kerr, H. J.....M
Kniskern, E. L.....Muskegon
LaCore, O. M.....Muskegon Heights
Lange, E. W.....Muskegon
Lauretti, Emil .....Muskegon
Laurin, V. Samuel.....Muskegon
LeFevre, George L.....Muskegon
LeFevre, Louis .....M
LeFevre, William M.....Muskegon
Loder, Leonel Lewis.....Muskegon
Loomis, John L.....Muskegon
Loughery, H. B.....Muskegon
Mandeville, C. B.....Muskegon
Medema, Paul E.....Muskegon
Meengs, M. B.....M
Miller, Philip L.....M
Morford, F. N.....Muskegon
Morse, Bertram W.....M
Mulligan, A. W.....Muskegon
Oden, Constantine L.....Muskegon
Olson, R. G.....Muskegon Heights
Pangerl, Carl.....Muskegon Heights
Petkus, Antonie .....Muskegon
Pettis, Emmett .....Muskegon
Powers, Lunette .....Muskegon
Price, Leonard .....M
Pyle, H. J.....Muskegon
Risk, R. A.....Muskegon
Risk, Robert D.....M
Scholle, N. W.....M
Sears, Richard .....Muskegon
Stone, Maxwell E.....Muskegon
Swartout, W. C.....Muskegon
Teifer, Charles A.....Muskegon
Thieme, S. W.....Ravenna
Thornton, E. S.....Muskegon
Wilke, C. A.....Montague
Wilson, P. S.....Muskegon

Newaygo County

Barnum, W. H.....Fremont
Black, B. F.....Holton
Deur, T. R.....Grant
Edwards, Albert .....Fremont
Geerlings, Lambert .....Fremont
Geerlings, Lewis J.....M
Geerlings, Willis .....Fremont
Gordon, B. F.....M
Moore, H. R.....Newaygo
Saxen, Raymond T.....White Cloud
Stryker, O. D.....Fremont
Tompsett, Arthur O.....Hesperia

Northern Michigan County

Benson, A. A.....Mancelona
Beuker, Bernard .....East Jordan
Blum, Benjamin B.....Petoskey
Burns, Dean C.....Petoskey
Chapman, Willis Earle.....Cheboygan
Conkle, Guy C.....Boyne City
Conti, Joseph .....Petoskey
Conway, Wm. S.....M
Duffie, Don Hastings....Central Lake
Frank, Gilbert E.....Harbor Springs
Giffords, Mark .....M
Gilpin, John H.....Cheyboygan
Hegener, A. J.....Petoskey
Larson, Walter E.....Levering
Lashmet, Floyd H.....Petoskey
Lilga, Harris V.....M
Litzenburger, A. F.....Boyne City
Mast, W. H.....Petoskey
Mayne, Frederick C.....Cheboygan
McCarroll, James C.....Cheboygan
McCune, Wm. Stanley.....M
McLeod, M. D.....Petoskey
McMillan, Fraley .....Charlevoix
McMillan, Lyle D.....Mackinac City
Miller, Samuel .....M
Palmer, Russell.....St. James
Parks, W. H.....Petoskey
Reed, Wilbur F.....Cheboygan
Rodgers, John .....Bellaire
Saltonstall, Gilbert B.....Charlevoix
Slade, H. G.....Onaway
Stringham, J. R.....Cheboygan
Tiffany, A. C.....Mackinac City
Van Dellen, Jerrian.....East Jordan
Winter, Joseph A.....Cheboygan

Oakland County

Abbott, V. C.....M
Ankoff, Harry .....Pontiac
AschenBrenner, Z. R.....Farmington
Baker, Frederick A.....Pontiac
Baker, Robert H.....Pontiac
Barker, Howard B.....Pontiac
Bauer, Ernest W.....Hazel Park
Beattie, W. G.....Ferndale
Beck, Otto O.....Birmingham
Benning, C. H.....M
Berg, Richard H.....Oxford
Boucher, R. E.....M
Burke, Chauncey G.....Pontiac
Butler, Samuel A.....Pontiac
Campbell, Malcolm D.....M
Carr, Wm. H.....Holly
Christie, Edward D.....Pontiac
Christie, J. W.....M
Church, J. E.....Pontiac
Cobb, Leon F.....Pontiac
Cobb, Thomas H.....Pontiac
Cooper, Robert J.....M
Cottrell, Martha S.....Novi
Couchman, Boyd.....Royal Oak
Crissman, Harold C.....Ferndale
Cudney, Ethan B.....Pontiac
Dahlgren, Carl.....Keego Harbor
Darling, C. G., Jr.....Pontiac
Dobski, Edwin J.....M
Domeier, L. H.....M
Ekelund, Clifford T.....Pontiac
Farnham, Lucius A.....Pontiac
Faulconer, Albert .....M
Francis, Donald .....M
Ferris, Ralph G.....Birmingham
Fitzpatrick, Francis .....Pontiac
Flick, Earl J.....M
Flick, John R.....Royal Oak
Foust, Earl W.....M
Fox, John W.....Pontiac
Furlong, Harold A.....M
Gaensbauer, Ferdinand .....Pontiac
Gariepy, Bernard F.....Royal Oak
Gatley, C. R.....M
Gatley, L. Warren.....Pontiac
Geib, Ormond D.....Rochester
German, Frank D.....Pontiac
Gill, Matthew J.....M
Gordon, J. H.....Birmingham
Grant, William A.....Milford
Green, Wm. M.....Pontiac
Halsted, Lee H.....Farmington
Hammer, Carl W.....M
Hammonds, E. E.....M
Harvey, Campbell .....Pontiac
Hassberger, J. B.....M
Hathaway, Clarence L.....Lake Orion
Hathaway, William .....Rochester
Henry, Colonel R.....Ferndale
Hensley, C. B.....Lake Orion
Howlett, E. V.....Pontiac
Hoyt, D. F.....M
Hubert, John R.....M
Huffman, M. R.....Milford
Hume, T. W. K.....Auburn Heights
Hurst, Daniel D.....Pleasant Ridge
Hutchinson, W. G.....Pontiac
Jones, Morrell M.....Drayton Plains
Kemp, Felix J.....Pontiac
Kemp, W. Lloyd.....Birmingham
Kimball, A. S.....Pontiac
Kirkup, Norman N.....M
Lambie, John S.....Pontiac
Lambert, Alvin Gerald.....Ferndale
Larson, B. T.....Pontiac
Lass, E. H.....M
Lawler, C. F.....Birmingham
Lewis, S. M.....Ferndale
Little, J. W.....M
Lockwood, C. E.....Holly
MacKenzie, O. R.....Walled Lake
Morgrave, Edmund D.....Royal Oak
Markley, John M.....M
Mason, Robert J.....M
McConkie, J. P.....Birmingham
McEvoy, Francis J.....M
McNeill, H. H.....Pontiac
Meinke, Herman A.....Hazel Park
Mercer, Frank A.....Pontiac
Mitchell, B. M.....Pontiac
Monroe, John D.....Pontiac
Mooney, C. A.....Ferndale
Needle, Francis .....M
Newcomb, Arnold B.....Berkley
Norup, John .....Berkley
Nosanchuk, Joseph .....M
Ohlmacher, A. P.....M
Olsen, Richard E.....M
Osgood, S. W.....M
Pauli, Theodore H.....M
Pool, H. H.....Pontiac
Pelletier, Charles J.....M
Porritt, Ross J.....M
Ports, Preston W.....M
Raynale, George P.....Birmingham
Reid, Fred T.....Clawson
Rennell, E. J.....Pontiac
Riker, Aaron D.....Pontiac
Roehm, Harold R.....Birmingham
Rowley, Laurie G.....Drayton Plains
Russell, Vincent P.....M
St. John, Harold A.....Pontiac
Schlecte, Carl .....M
Schlecte, Eve M.....Rochester
Schoenfeld, John B.....M
Schuneman, Howard .....Ferndale
Seaborn, A. J.....Royal Oak
Shadley, Maxwell .....M
Shaw, Nenian T.....Birmingham
Simpson, E. K.....Pontiac
Smith, Carleton A.....M
Smith, Ellen .....Pontiac
Smith, Donald S.....M
Spears, M. L.....Pontiac
Spencer, Lloyd H.....M
Spohn, Earl W.....M
Stahl, Harold F.....Oxford
Stanley, Wm. F.....M
Starker, Charles T.....Pontiac
Steinberg, Norman.....Royal Oak
Stolpman, A. K.....M
Sutton, Palmer E.....Royal Oak
Tuck, Raymond G.....Pontiac
Uloth, Milton J.....Ortonville
Vatz, Jack A.....Pontiac
Wagley, P. V.....M
Watson, Thomas Y.....M
Wentz, A. E.....M
Young, Arthur R.....Pontiac

Oceana County

Day, Clinton .....Hart
Flint, Charles .....M
Hayton, A. R.....Shelby
Heard, Wm.....Pentwater
Heysett, Norman W...Ft. Wayne, Ind.
Jensen, Viggo .....Shelby
Lemke, Walter M.....M
Munger, L. P.....Hart
Nicholson, John H.....Hart
Reetz, Fred A.....Shelby
Robinson, W. Gordon.....M
Wood, Merle G.....Hart

Ontonagon County

Bender, Jesse L.....Mass
Hogue, H. B.....Ewen
Pinkerton, W. J.....Ontonagon
Rubinfeld, S. H.....M
Strong, W. F.....Ontonagon
Whiteshield, C. F.....Trout Creek

Ottawa County

Beernink, E. H.....Grand Haven
Bloemendaal, D. C.....Zeeland
Bloemendal, W. B.....Grand Haven
Boone, Cornelius E.....Zeeland
Bos, G. D.....Holland
Clark, Nelson H.....M
Cook, Carl S.....M
DeVries, H. C.....Holland
DeWitt, W. L.....Grand Haven
Harms, H. P.....M
Kemme, Gerrit .....Zeeland
Kitchel, John.....Grand Haven
Kitchel, Mary.....Grand Haven
Kools, Wm. Clarence.....Holland
Leenhouts, Abraham .....Holland
Long, C. E.....Grand Haven
Nichols, Rudolph H.....Holland
Nykamp, Russell .....Zeeland
Presley, Wm. J.....Grand Haven
Rypkema, Willard M.....M
Stickley, A. E.....Coopersville
Ten Have, Ralph.....Grand Haven
Timmerman, E. C.....M
Van Appledorn, Chester J....Holland
Van Der Berg, E.....Holland
Van der Velde, O.....Holland
Westgate, William .....Holland
Wiersma, Silas C.....Hudsonville
Winter, John K.....Holland
Winter, Wm. G.....Holland

Saginaw County

Ackerman, G. L.....Saginaw
Anderson, W. K.....Saginaw
Bagley, U. S.....Saginaw
Bagshaw, David E.....Saginaw
Berberovich, T. F.....Saginaw
Bishop, H. M.....M
Brender, Fred P.....Frankenmuth
Brock, W. H.....Saginaw
Bruton, Martin F.....Saginaw
Busch, Frank J.....Saginaw
Butler, M. G.....M
Button, A. C.....Saginaw
Cady, F. J.....Saginaw
Cameron, Allen K.....Saginaw
Campbell, L. A.....Saginaw
Catizone, R. J.....Merrill
Chisena, Peter E.....M
Clark, Wilbert B.....Saginaw
Claytor, Archer A.....Saginaw
Cortopassi, Andre .....Saginaw
Cortopassi, V. E.....M
Cory, C. W.....M
Curts, James .....M
Durman, Donald .....Saginaw
Ely, C. W.....Saginaw
Ernst, Arthur R.....Saginaw
Eymer, Esther .....Saginaw
Fleschner, Thomas E.....Birch Run
Gage, David P.....Saginaw
Galsterer, Edwin C.....Saginaw
Gerber, Herbert .....M
Goman, Louis D.....Saginaw
Grigg, Arthur .....Saginaw
Grigg, Arthur P.....M
Hand, Eugene .....M
Harvie, L. C.....Saginaw
Helmkamp, Herbert O.....Saginaw
Hester, E. G.....Saginaw
Hill, Victor L.....Saginaw
Hohn, Fred, Jr.....Saginaw
Howell, Don M.....Saginaw
Imerman, Harold M.....M
Jaenichen, R, ...Saginaw
James, J. W.....M
Jiroch, R. S.....Saginaw
Jordan, Leo A.....Saginaw
Keller, S. S.....Saginaw
Kemp, J. M.....Saginaw
Kempton, R. M.....Saginaw
Kerr, William .....M
Kirchgeorg, Clemens G...Frankenmuth
Kleekamp, H. G.....Saginaw
Knott, Harriet A.....Saginaw
Kowals, F. V.....Saginaw
Ling, Ernest M.....Hemlock
Lohr, O. W.....Saginaw
Longstreet, Martha L.....Saginaw
Luger, F. E.....M
Lurie, Robert .....M
MacKinnon, Edward D.....Saginaw
MacMeekin, James Ware.....M
Markey, Jos. P.....Saginaw
Martzowka, Wm. P.....Saginaw
Maurer, J. G.....Saginaw
Maurer, John A.....M
McGregor, R. .....Saginaw
McKinney, Alex R.....Saginaw
McLandress, Joshua A.....Saginaw
Meyer, Henry J.....Saginaw
Moon, A. R.....Saginaw
Mikan, V. Robert.....Saginaw
Mudd, Richard D.....M
Murphy, Albert P.....Saginaw
Murray, Chas. R.....M
Nicholas, Mildred .....Saginaw
Novy, F. O.....Saginaw
O'Reilly, Wm. J.....Saginaw
Ostrander, Frank W.....Freeland
Phillips, Homer A.....M
Pietz, Frederick .....Saginaw
Pillsbury, Edward A.....Frankenmuth
Potvin, Clifford D.....M
Richards, Ned W.....M
Richter, Harry J.....M
Ryan, M. D.....Saginaw
Ryan, R. S.....Saginaw
Sample, J. T.....Saginaw
Sargent, D. V.....M
Schaiberger, Elmer .....Saginaw
Schneider, Alexander .....M
Sheldon, S. A.....M
Skowronski, Casimer A.....M
Slack, Walter K.....M
Stander, A. C.....M
Stewart, George W.....M
Stiller, A. F.....Saginaw
Thomas, Dale .....Saginaw
Tiedke, G. E.....M
Toshach, C. E.....Saginaw
Wallace, Herbert C.....M
Westlund, Norman .....Saginaw
Wilson, H. Roy.....Saginaw
Yntema, S. .....M

Sanilac County

Blanchard, E. W.....Deckerville
Ellis, N. J.....Croswell
Gift, W. A.....Marlette
Gordon, Vida H.....Sandusky
Hart, R. K.....Croswell
Koch, D.....M
Learmont, H. H.....Croswell
McGunegle, K. T.....Sandusky
Norgaard, Hal V.....M
Seager, M. Cole.....Brown City
Tweedie, G. Evans.....Sandusky
Tweedie, S. Martin.....Sandusky
Webster, John C.....Marlette

Shiawassee County

Alexander, Reuben G.....Laingsburg
Arnold, Alfred L., Jr.....Owosso
Arnold, A. L., Sr.....Owosso
Backe, John C.....M
Brandel, J. M.....M
Brown, Richard J.....M
Buzzard, Walter D.....M
Cramer, George L. G.....Owosso
Crane, C. A.....Corunna
Fillinger, W. B.....Ovid
Greene, I. W.....Owosso
Hoshal, Vern L.....Durand
Hume, Arthur M.....Owosso
Hume, Harold A.....Owosso
Janci, Julius .....M
Kaufman, H. J.....M
Linden, V. E.....M
McKnight, E. R.....M
Parker, W. T.....Owosso
Pochert, R. C.....Owosso
Richards, C. J.....Durand
Shepherd, W. F.....M
Slagh, E. M.....M
Soule, Glenn T.....Henderson
Watts, Fred A.....Owosso
Weinkauf, W. F.....Corunna
Weston, C. L.....Owosso
Wilcox, Anna L.....Owosso
Wilcox, C. M.....M

St. Clair County

Armsbury, A. B.....Marine City
Atkinson, J. M.....Port Huron
Attridge, J. A.....Port Huron
Banting, K. C.....Port Huron
Battley, J. C. S.....Port Huron
Beck, Frank K.....Port Huron
Biggar, R. J.....M
Borden, C. L.....Yale
Boughner, W. H.....Algonac
Bovee, M. E.....Port Huron
Brush, Howard O.....Port Huron
Burke, Ralph M.....Port Huron
Burley, Jacob H.....Port Huron
Callery, A. L.....Port Huron
Campbell, R. H.....St. Clair
Carey, Lewis M.....Detroit
Carney, F. V.....St. Clair
Clyne, B. C.....M
Cooper, T. H.....Port Huron
DeGurse, T. E.....Marine City
Derck, W. P.....Marysville
Fraser, Robert C.....Port Huron
Hall, W. E. B.....Port Huron
Heavenrich, Theodore F....Port Huron
Holcomb, R. J.....Marine City
Kesl, Geo. Matthew.....Port Huron
Le Galley, K. B.....M
Licker, R. R.....M
Ludwig, F. E.....M
Martin, C. S.....Port Huron
McColl, D. J.....Port Huron
McColl, Neil J.....Port Huron
Meredith, E. W.....Port Huron
Patterson, D. Webster.....Port Huron
Pollack, Donald A.....Yale
Reynolds, Annie E.....Port Huron
Ryerson, W. W.....Port Huron
Schaefer, W. A.....Port Huron
Searles, Karl F.....Capac
Sites, E. C.....Port Huron
Thomas, C. F.....Port Huron
Treadgold, Douglas .....Port Huron
Vroman, M. E.....Port Huron
Waltz, J. F.....Capac
Ware, John R.....Port Huron
Wass, Henry C.....St. Clair
Waters, George .....Port Huron
Wellman, Joseph E.....Port Huron
Wight, William G.....Yale
Witter, Gordon L.....M
Zemmer, A. L.....Port Huron

St. Joseph County

Berg, Lawrence A.....M
Brunson, A. E.....Colon
Buell, Martin.....M
Dodrill, F. D.....Ann Arbor
Fiegel, S. A.....M
Fortner, R. J.....Three Rivers
Hoekman, Abea .....M
Holm, Arvid G.....M
Kane, David M.....Sturgis
Miller, C. G.....Sturgis
Parrish, Marion .....Sturgis
Pennington, H. C.....White Pigeon
Porter, C. G.....Three Rivers
Raisch, Fred J.....M
Reed, Fred R.....Three Rivers
Rice, John W.....M
Shaw, G. D. .....M
Sheldon, J. P.....M
Slote, L. K.....Constantine
Springer, R. A.....Centerville
Sweetland, G. J.....Constantine
Weir, Dale C.....Three Rivers
Wilkerson, Nina C.....Sturgis
Zimont, R. D.....M

Tuscola County

Barbour, Harry A.....Mayville
Bates, George .....Kingston
Berman, Harry .....Millington
Cook, George Harvey.....Caro
Cook, Raymond .....Akron
Dickerson, Willard W.....Caro
Dixon, Robert J.....Caro
Donahue, Theron.....Cass City
Fisher, Robert E.....M
Flett, Richard O.....Millington
Fox, Denton B.....Wahjamega
Gugino, Frank J.....M
Hoffman, T. E.....M
Howlett, R. R.....Caro
Johnson, O. G.....Mayville
Kaven, G. H.....Unionville
MacRae, L. D.....Gagetown
Merrill, Elmer H.....Caro
Morris, Frank L.....Cass City
Riley, G. M.....New Orleans, La.
Rundell, Annie Stevens.....Vassar
Ruskin, D. B.....Caro
Savage, Lloyd L.....Caro
Shoemaker, J. .....Vassar
Spohn, U. G.....Fairgrove
Starmann, Bernard .....Cass City
Swanson, E. C.....Vassar
Vail, Harry F.....M
Von Renner, Otto.....Vassar

Van Buren County

Boothby, F. M.....Lawrence
Bope, William P.....Decatur
Buckborough, M. W.....South Haven
Diephus, Bert .....M
French, Merle R.....Paw Paw
Gano, Avison .....M
Giddings, Ralph R.....M
Giffen, John R.....Bangor
Greenman, Newton H.....Decatur
Hall, E. J.....M
Hasty, Willis A.....M
Hoyt, W. F.....Paw Paw
Iseman, Joseph W.....M
Itzen, J. F.....South Haven
Laird, Emma .....Paw Paw
Lowe, Edwin G.....Bangor
Maxwell, J. Charles.....Paw Paw
McNabb, A. A.....Lawrence
Murphy, Norman B.....Bangor
Penoyar, C. L.....South Haven
Sayre, Phillip P.....South Haven
Spalding, R. W.....Gobles
Steele, Arthur H.....Paw Paw
TenHouten, Chas. .....M
Terwilliger, Edwin .....M
Urist, Martin J.....South Haven
Williams, F. N.....Hartford
Young, William R.....Lawton

Washtenaw County

Agate, George H.....M
Alexander, John.....Ann Arbor
Armstrong, Richard O.....M
Badgley, Carl E.....Ann Arbor
Barker, Paul .....Ann Arbor
Barnes, Allan C.....M
Barnwell, John B.....Ann Arbor
Barr, A. S.....Ann Arbor
Barss, Harold D.....Ypsilanti
Bassow, Paul H.....Ann Arbor
Baugh, R. H.....Milan
Beebe, Hugh M.....Ann Arbor
Bell, Margaret .....Ann Arbor
Belser, Walter .....Ann Arbor
Blair, Thomas H.....M
Brace, William M.....Ann Arbor
Breakey, J. F.....Ann Arbor (Ret.)
Britton, H. B.....Ypsilanti
Brown, Phillip .....Ypsilanti
Bulmer, Dan J.....M
Burge, Curtis H.....Ann Arbor
Buscaglia, C. J.....M
Camp, Carl Dudley.....Ann Arbor
Clements, Glenn T.....Ann Arbor
Cody, Claude C.....Ann Arbor
Coller, Frederick A.....Ann Arbor
Conger, Kyril B.....M
Cooper, James H.....Ann Arbor
Cooper, Ralph Ruehl.....M
Coxon, Alfred W.....Ann Arbor
Crabtree, Peter .....M
Cummings, H. H.....Ann Arbor
Curtis, Arthur C.....Ann Arbor
Davis, Fenmore E.....M
Day, A. Jackson.....M
De Jong, Russell.....Ann Arbor
DeTar, John S.....Milan
DeWeese, David D.....Ann Arbor
Dimitroff, Sim .....Ann Arbor
Dingman, Reed O.....Ann Arbor
Donaldson, S. W.....Ann Arbor
Dowman, Charles E.....M
Duff, Ivan F.....M
Dunstone, H. C.....Ypsilanti
Engelke, Otto K.....Ann Arbor
Failing, Joseph H.....Ann Arbor
Falls, Harold F.....Ann Arbor
Farrior, J. Brown.....M
Finley, Helen L.....Ann Arbor
Fitzgerald, Thomas D.....M
Forbes, Stephen A.....Ann Arbor
Forsythe, Warren E.....Ann Arbor
Foster, D. Bernard.....Ann Arbor
Fralick, F. Bruce.....Ann Arbor
Freyberg, Richard H.....Ann Arbor
Frye, Carl H.....Ann Arbor
Ganzhorn, Edwin .....Ann Arbor
Gardiner, Sprague .....M
Gates, Neil A.....Ann Arbor
Green, Mervin E.....M
Gulde, Andros .....Chelsea
Hagerman, George W.....M
Hammond, George .....M
Hammond, W. W.....Plymouth
Handorf, Heinrich Hugo....Northville
Hannum, M. R.....Milan
Haynes, Harley A.....Ann Arbor
Henry, L. Dell.....Ann Arbor
Healey, Claire E.....Ann Arbor
High, Howard C.....M
Himler, Leonard E.....Ann Arbor
Hirschfield, Alex H.....M
Hodges, Fred J.....Ann Arbor
Holt, John F.....Ann Arbor
Howard, S. C.....Ann Arbor
Howes, Homer A.....M
Jay, Baird D.....Ann Arbor
Jenkins, Richard L.....Ann Arbor
Jimenez, Buenaventura.....Ann Arbor
Johnson, Lester J.....M
Johnston, Franklin D.....Ann Arbor
Jordan, Paul H.....M
Kahn, Edgar A.....M
Keller, Arthur P.....M
Kemper, J. W.....Ann Arbor
Kennedy, John O.....Ann Arbor
Kiehn, Clifford .....M
Kleinschmidt, Gladys.....Toledo, Ohio
Klingman, Theophil .....Ann Arbor
Knoll, Leo A.....Ann Arbor
Kretzschmar, Norman R....Ann Arbor
La Fever, Sidney L.....Ann Arbor
Lampe, Isadore .....Ann Arbor
Law, John L.....Ann Arbor
Levin, Manuel .....M
Lichty, Dorman E.....Ann Arbor
List, Carl F.....Ann Arbor
Lowell, Vivion F.....M
Lynn, Harold P.....Ypsilanti
Lyons, Richard H.....Ann Arbor
McIntyre, Dugald S.....M
Malcolm, Karl D.....Ann Arbor
Marshall, Mark .....Ann Arbor
Maxwell, James H.....Ann Arbor
McCotter, Rollo E.....Ann Arbor
McEachern, Thomas H.....Ann Arbor
McKhann, Charles F.....Ann Arbor
Metzger, Ida .....Ypsilanti
Milford, Albert F.....Ypsilanti
Miller, Harold .....M
Miller, Norman F.....Ann Arbor
Moore, Donald F.....M
Muehlig, George F.....Ann Arbor
Myers, Dean W.....Ann Arbor
Nesbit, Reed M.....Ann Arbor
Newton, Chas. W.....Ann Arbor
Oliphant, L. W.....Ann Arbor
Patterson, Ralph M.....Ann Arbor
Peet, Max .....Ann Arbor
Pillsbury Charles B.....Ypsilanti
Pollard, H. M.....Ann Arbor
Power, Frank H.....M
Price, Helen F.....Ann Arbor
Prout, Gordon J.....Saline
Quirk, Edmund J.....Chelsea
Ragué, Paul O.....M
Ransom Henry .....Ann Arbor
Raphael, Theophile .....Ann Arbor
Ratliff, Rigdon K.....Ann Arbor
Reynolds, Stephen .....M
Riecker, H. H.....Ann Arbor
Riggs, Harold W.....Ann Arbor
Robb, David N.....Ypsilanti
Rosenbaum, Francis F.....Ann Arbor
Sacks, Wilma .....Ann Arbor
Salon, Dayton D.....M
Schumacker, W. E.....Ann Arbor
Scott, Robert R.....M
Scott, William C.....M
Scurry, Maurice McL.....M
Seevers, Maurice H.....Ann Arbor
Seime, Reuben I.....Ypsilanti
Sink, Emory W.....Ann Arbor
Smalley, Marianna .....Ann Arbor
Smith, Joseph G.....M
Snow, Glenadine.....Ypsilanti
Solis, Jeanne C.....Ann Arbor
Soller, M. E.....Ypsilanti
Sturgis, Cyrus C.....Ann Arbor
Sundwall, John .....Ann Arbor
Teed, Reed Wallace.....M
Thieme, E. Thurston.....M
Towsley, Harry A.....M
Vander Slice, David.....Ann Arbor
Waggoner, R. W.....Ann Arbor
Waldron, Alexander M.....M
Wallace, J. B.....Saline (Ret.)
Wanstrom, Ruth C.....Ann Arbor
Washburne, Charles L.....Ann Arbor
Watson, Ernest H.....Ann Arbor
Weller, Carl V.....Ann Arbor
Wessinger, John A.....Ann Arbor
Wile, Udo J.....M
Williams, Howard R.....Ann Arbor
Wisdom, Inez .....Ann Arbor
Woods, J. J.....Ypsilanti
Worth, Melissa H.....Ypsilanti
Wright, Walter J.....Ypsilanti
Wylie, Wm. C.....Dexter
Yoder, O. R.....Ypsilanti

Wayne County

Aaron, Charles D. .....Detroit
Abrams, Harry M. .....Detroit
Abramson, Max .....Detroit
Abruzzo, Anthony M.....M
Adams, James Robert .....Dearborn
Adelson, Sidney L. .....M
Adler, Sidney .....M
Agins, Jacob .....Detroit
Agnelly, Edward J. .....Detroit
Agnew, George H.....Detroit
Alderman, R. F. .....Detroit
Aldrich, Napier S. .....M
Alford, E. S. .....Belleville
Allen, John V.....Lincoln Park
Alles, Russell W. .....Detroit
Allison, Frank B.....Detroit
Allison, Herbert C.....
.....Grosse Pointe Farms
Altshuler, Abraham M. .....Detroit
Altshuler, Ira M. .....Detroit
Altshuler, Samuel S. .....M
Amberg, Emil .....Detroit
Amos, Thomas G. .....Detroit
Anderson, Bruce .....Detroit

Anderson, Gordon H. .....M
Anderson, J. O. .....Detroit
Anderson, Walter L. .....M
Anderson, Walter T. .....Detroit
Andries, Joseph H. .....Detroit
Andries, Raymond C. .....Detroit
Angel, John J. .....Wayne
Ankley, J. W. .....Detroit
Annessa, Dommenico Marcill...Detroit
Anslow, Robert E. .....Detroit
Appel, Phillip R. .....Detroit
Appelman, H. B. .....Detroit
Arehart, Burke W. .....M
Armstrong, Arthur G. .....Detroit
Arnold, Effie .....Detroit
Aronstam, Noah E. .....Detroit
Ascher, Meyer S. .....M
Ashe, Stilson R. .....Detroit
Ashley, L. Byron .....M
Ashton, F. B. .....Highland Park
Asselin, J. L. .....Detroit
Asselin, Regis F. .....M
Athay, Roland M. .....Detroit
Atchison, Russell M. .....Northville
Atler, Lawrence R. .....Detroit
Atler, Leroy L. .....M
August, Harry E. .....Detroit
Axelrod, Stanley H. .....Detroit
Axelson, A. U. .....Detroit
Babcock, Kenneth B. .....M
Babcock, L. K. .....Detroit
Babcock, Myra E. .....Detroit
Babcock, W. W. .....Detroit
Bach, Walter F. .....Detroit
Bachman, Morris E. .....Detroit
Bacon, Vinton A. .....Detroit
Baer, George J. .....Detroit
Baer, Ramond B. .....Detroit
Baeff, Michael A. .....Detroit
Bagley, Harry E. .....M
Bailey, Carl C. .....M
Bailey, Don A. .....Detroit
Bailey, Louis J. .....Detroit
Baker, Clarence .....Detroit
Baker, Howard B. .....Detroit
Balaga, F. T. .....Detroit
Balcerski, Matthew A. .....Detroit
Ballard, Charles S. .....Detroit
Balser, Charles W. .....Detroit
Baltz, James I. .....Detroit
Baranowski, A. W. .....Detroit
Barker, F. Marion .....Grosse Pointe
Barnett, Louis L. .....M
Barnett, Saul E. .....Detroit
Barone, Charles J. .....Highland Park
Barrett, Wyman D. .....Detroit
Bartemeier, Leo H. .....Detroit
Barton, J. R. .....Detroit
Bates, Gaylord S. .....M
Bauer, Benedict J. .....Detroit
Bauer, A. Robert .....Detroit
Bauer, Lester Eugene .....M
Baumann, W. L. .....Detroit
Baumer, Moe .....M
Baumgarten, Elden C. .....Detroit
Bayles, John G. .....Detroit
Beach, Watson .....Detroit
Beam, A. Duane .....M
Beaton, Colin .....M
Beattie, Robert .....Detroit
Beatty, S. M. .....Detroit
Beaver, Donald C. .....Detroit
Beck, Eva F. .....Eloise
Becker, Abraham .....M
Becklein, C. L. .....Detroit
Beckwitt, M. C. .....M
Bedell, A. .....Detroit
Beer, Joseph F. .....M
Beeuwkes, L. E. .....M
Begle, Howell L. .....Detroit
Behn, Claud W. .....Detroit
Beigler, Sydney K. .....Detroit
Beitman, Max R. .....M
Belanger, Ernest E. .....M
Belanger, Henry .....Detroit
Belknap, Warren F. .....M
Bell, J. Kenner .....Detroit
Bell, William M. .....Detroit
Bennett, Germany E. .....Detroit
Bennett, Harry B. .....Detroit
Bennett, Zina B. .....Detroit
Benson, C. D. .....M
Benson, Davis A. .....M
Bentley, Frederick E. .....Plymouth
Bentley, Neil I. .....Detroit
Berent, Morris S. .....Detroit
Beresh, Louis .....M
Berge, Clarence A. .....Detroit
Bergman, Murray Stewart.....Detroit
Bergo, Howard L. .....M
Berke, Sydney S. .....Detroit
Berkey, William E. .....Detroit
Berlien, Ivan C. .....M
Berman, Harry S. .....Detroit
Berman, Lawrence .....Detroit
Berman, Robert .....Detroit
Berman, Sidney .....M
Bernard, Walter G. .....Detroit
Bernbaum, Bernard .....Detroit
Bernstein, Albert E. .....Detroit
Bernstein, Samuel S. .....M
Berry, Joseph E. .....Detroit
Besancon, J. H. .....Detroit
Best, T. H. Edward .....Detroit
Bicknell, Edgar A. .....M
Bicknell, Frank B. .....M
Bicknell, Nathan J. .....Detroit
Biddle, Andrew P. .....Detroit
Birch, John R. .....M
Birkelo, Carl C. .....Detroit
Bittker, I. Irving .....Detroit
Bittrich, Norbert M. .....Detroit
Black, Perry S. .....Detroit
Blackford, Roger W. .....Detroit
Blain, Alexander W. .....Detroit
Blain, James H. Jr. .....M
Blair, K. E. .....Detroit
Blashill, James B. .....M
Bleier, Joseph .....Detroit
Bloch, Abraham .....Detroit
Blodgett, William E. .....Detroit
Blodgett, William H. .....M
Bloom, Arthur R. .....Detroit
Blumenthal, Franz L. .....Detroit
Boccaccio, John .....M
Boccia, James J. .....M
Boddie, Arthur W. .....Detroit
Boehm, John D. .....Detroit
Boell, Arthur F. .....Detroit
Bogusz, Ladislaus .....Eloise
Bohn, Stephen .....M
Boileau, Thornton I. .....M
Boles, A. E. .....M
Bookmyer, R. H. .....Detroit
Bookstein, Abraham M. .....M
Bovill, E. G. .....M
Bower, Franklin T. .....Detroit
Bowers, Leo J. .....Detroit
Bowman, Frank E. .....Detroit
Boyd, John H. .....Trenton
Brachman, D. S. .....Detroit
Bracken, Andrew H. .....Dearborn
Bradford, Henry .....M
Bradley, George .....Detroit
Bradshaw, William H. .....Detroit
Braitman, Louis .....Detroit
Braley, W. N. .....Detroit
Bramigk, F. W. .....Detroit
Brand, Benjamin .....Detroit
Brando, Russell G. .....Detroit
Brandt, Edward L. .....Detroit
Braun, Lionel .....M
Breitenbecher, E. R. .....Detroit
Brengle, Deane R. .....Detroit
Breon, Guy L. .....Detroit
Briegel, Walter A. .....Detroit
Brines, O. A. .....M
Bringard, Elmer L. .....M
Brisbois, Harold J. .....Plymouth
Brodersen, Harvey S. .....River Rouge
Bromme, William .....Detroit
Brooks, A. L. .....Detroit
Brooks, Clark D. .....Detroit
Brooks, Charles W. .....M
Brooks, Nathan .....M
Brosius, William L. .....Detroit
Broudo, Philip H. .....Detroit
Brough, Glen A. .....M
Brown, A. O. .....Detroit
Brown, Carlton F. .....M
Brown, George Francis .....Detroit
Brown, Gordon T. .....Detroit
Brown, Harvey F. .....Detroit
Brown, Henry S. .....Detroit
Brown, John R. .....M
Brown, Stanley H. .....Detroit
Brown, Thomas A. .....Detroit
Brownell, Paul G. .....M
Bruehl, Richard A. .....Detroit
Brunk, Andrew S. .....Detroit
Brunk, C. F. .....Detroit
Brunke, Bruno B. .....Detroit
Brush, Brock Edwin .....Detroit
Bryce, John D. .....M
Buchanan, W. Paul .....Detroit
Buchner, Harold W. .....M
Buck, John D. .....Detroit
Budson, Daniel .....Detroit
Buell, Charles E. Jr. .....Detroit
Buesser, Frederick G. .....Detroit
Burgess, Charles M. .....Detroit
Burgess, Jay M. .....Detroit
Burns, Robert T. .....Detroit
Burnham, David C. .....Detroit
Burnstine, Julius Y. .....Detroit
Burnstine, Perry P. .....M
Burr, George C. .....Detroit
Burr, H. Leonard .....Grosse Pointe
Burrows, Howard A. .....Dearborn
Burton, D. T. .....Detroit
Bush, Glendon J. .....M
Bush, Lowell M. .....Detroit
Buss, John A. .....Detroit
Butler, Harry J. .....Detroit
Butler, L. H. .....Detroit
Butler, Volney N. .....Detroit
Butterworth, Herman K...Lincoln Park
Buttrum, Edward J. .....M
Byers, Dudley W. .....Detroit
Byington, Garner M. .....Detroit

Caldwell, J. Ewart .....M
Calkins, H. N. .....M
Callaghan, T. T. .....M
Cameron, A. H. .....Wyandotte
Campau, George H. .....Detroit
Campbell, Duncan A. .....Detroit
Campbell, Mary B. .....Detroit
Candler, Clarence L. .....Detroit
Canter, Allie L. .....Detroit
Canter, Gayle E. .....Detroit
Caplan, Leslie .....M
Caraway, James E. .....M
Carey, Cornelius .....Detroit
Carleton, L. H. .....Detroit
Carlson, Harold W. .....Detroit
Carlucci, Peter F. .....Detroit
Carmichael, E. K. .....Detroit
Carnes, Harry E. .....M
Carp, Joseph .....M
Carpenter, C. H. .....Detroit
Carpenter, C. J. .....Detroit
Carpenter, Glenn B. .....Detroit
Carr, J. G. .....Detroit
Carroll, E. H. .....Detroit
Carson, Herman J. .....Detroit
Carstens, Henry R. .....M
Carter, John M. .....Detroit
Carter, L. F. .....Detroit
Cassidy, William J. .....Detroit
Castrop, C. W. .....Dearborn
Cathcart, Edward .....M
Catherwood, Albert E. .....Detroit
Caton, Dorothy .....Detroit
Caughey, Edward H. .....M
Cavell, Roscoe William .....M
Cetlinski, Constantine A...Hamtramck
Chall, Henry G. .....Detroit
Chalat, Jacob H. .....Detroit
Chance, J. H. .....Detroit
Chapman, Aaron L. .....Detroit
Chapman, Everett L. .....Detroit
Chapman, Paul T. .....Detroit
Chapnick, H. A. .....M
Chase, Clyde H. .....Detroit
Chatel, Arthur N. .....Detroit
Chene, George C. .....Detroit
Chenik, Ferdinand .....Detroit
Chester, W. P. .....Detroit
Chesluk, H. M. .....M
Childs, George Millard .....M
Chipman, W. A. .....Detroit
Chittenden, George E. .....M
Chittick, William R...San Diego, Calif.
Christensen, C. A. .....Dearborn
Christopher, James G. .....Detroit
Chrouch, Laurence A. .....Detroit
Cioffari, Mario S. .....Detroit
Ciprian, Joseph E. .....Detroit
Clapper, Muir .....Detroit
Clark, Benjamin W. .....M
Clark, C. M. .....Detroit
Clark, Donald K. .....Dearborn
Clark, Donald V. .....Detroit
Clark, George E. .....Detroit
Clark, Harold E. .....Detroit
Clark, Harry G. .....Detroit
Clark, Harry L. .....Detroit
Clark, Raymond L. .....Detroit
Clarke, Daniel M. .....Detroit
Clarke, Emilie Arnold .....Detroit
Clarke, George L. .....Detroit
Clarke, Niles A. .....M
Clarke, Norman E. .....Detroit
Clifford, Charles H. .....Detroit
Clifford, John E. .....M
Clifford, Thomas P. .....M
Clippert, J. C. .....Grosse Ile
Coan, Glenn L. .....Wyandotte
Coates, Carl Amos .....Dearborn
Cobane, John H. .....Detroit
Cochrane, Edgar G. .....Detroit
Cohn, Daniel E. .....M
Cohoe, Don A. .....Detroit
Cole, Fred H. .....Detroit
Cole, James E. .....Detroit
Cole, Wyman C. C. .....M
Coleman, Margarete W. .....Detroit
Coleman, William G. .....Redford
Coll, Howard R. .....Detroit
Collings, M. Raymond .....Detroit
Collins, Arthur D. .....M
Collins, Edmund F. .....Detroit
Collins, James D. .....Detroit
Colvin, Leslie T. .....Detroit

Colyer, Raymond G.....Detroit
Connelly, Basil L.....Detroit
Connelly, Richard C.....Detroit
Connolly, Frank .....Detroit
Connolly, John P.....Detroit
Connor, Guy L.....Detroit
Connors, J. J.....Detroit
Conrad, E. R.....Detroit
Constable, Canute G.....Detroit
Cook, James C.....M
Cooksey, Warren B.....M
Coolidge, Maria Belle..Grosse Pte. Park
Cooper, E. L.....Detroit
Cooper, James B.....Detroit
Corbeille, Catherine .....Detroit
Coseglia, Robert P.....Detroit
Costello, Russell T.....Detroit
Cotruro, L. D.....Detroit
Cotton, S. O.....Detroit
Coucke, Henry O.....M
Coulter, William J.....Detroit
Cowan, Wilfrid .....Detroit
Cowen, Leon B.....Detroit
Cowen, Robert L.....Detroit
Coyne, Douglas Ruthven.....Detroit
Craig, Henry R.....Eloise
Craig, Roy D.....Detroit
Crane, Langdon T.....Detroit
Crawford, Albert S.....Detroit
Cree, Walter J.....Detroit
Crews, Thomas H.....Detroit
Croll, L. J.....M
Cross, Harold E.....Detroit
Crossen, Henry F.....Detroit
Croushore, J. E.....M
Cruikshank, Alexander .....Detroit
Culp, Ormond .....M
Curhan, Joseph Howard.....Detroit
Curry, F. S.....Detroit
Curtis, Frank E.....Detroit
Cushing, Russell G.....Detroit
Cushman, H. P.....Detroit

Dale, Esther H.....Detroit
Dana, Harold M.....M
Danforth, J. C.....Detroit
Danforth, M. E.....Detroit
Daniels, L. E.....Detroit
Darling, Milton A.....Detroit
Darpin, Peter H.....Detroit
Davidson, Harry O.....M
Davies, Thomas S.....Detroit
Davies, Windsor S.....M
Davis, Egbert F.....Detroit
Davis, George H.....M
Davis, Lindon Lee.....M
Dawson, F. E.....Detroit
Dawson, W. A.....Inkster
Day, J. Claude.....M
Defever, Cyril R.....M
Defnet, William A.....Detroit
DeGroat, Albert .....M
DeHoratiis, Joseph .....Detroit
DeJongh, Edwin .....Detroit
Delbert, Stewart G.....M
Demaray, John F.....Detroit
Dempster, James H.....Detroit
DeNike, A. James.....Detroit
Denis, George M.....Detroit
Denison, Louis L.....Detroit
DePonio, Sylvester A.....Detroit
Derby, Arthur P.....Detroit
Derleth, Paul E.....Detroit
DeTomasi, Rome Q.....Detroit
Dibble, Harry F.....Detroit
Dickman, Harry M.....M
Dickson, B. R.....Detroit
Diebel, Nelson W.....Detroit
Diebel, William H.....Detroit
Dietzel, H. O.....Detroit
Dill, Hugh L.....Detroit
Dill, J. Lewis.....Detroit
DiLoreto, Panfilo Camillo.....M
Dittmer, Edwin .....Detroit
Dixon, Fred W.....M
Dixon, Ray S.....Detroit
Dodds, John C. .....Detroit
Dodenhoff, C. F.....Detroit
Doerr, Louis E., Jr.....M
Dolega, Stanley F.....M
Domzalski, C. A.....Detroit
Donald, Douglas .....M
Donald, William M.....Detroit
Donovan, Daniel R., Jr.....Detroit
Donovan, John D.....Detroit
Dorsey, John M.....Detroit
Doty, Chester A.....Detroit
Doub, Howard P.....Detroit
Douglas, Bruce H.....Detroit
Douglas, Clair L.....M
Dovitz, Benjamin W.....Detroit
Dow, Roy E.....Detroit
Dowling, H. E.....Detroit
Dowling, Pearl Christie.....Detroit

Downer, Ira G.....Detroit
Doyle, George H.....Detroit
Drake, Ellet H.....M
Drake, James J.....Detroit
Drews, Robert S.....Detroit
Drinkaus, Harold I.....Detroit
Droock, Victor .....Detroit
Drummond, Donald L.....Detroit
Dubnove, Aaron .....Detroit
DuBois, Paul W.....Detroit
Dubpernell, Karl .....Detroit
Dubpernell, Martin S.....Detroit
Ducey, Edward F.....M
Duffy, Edward A.....Detroit
Dudek, John J.....Wyandotte
Dundas, E. M.....Detroit
Dunlap, Henry A.....Detroit
Dunlap, Samson F.....Detroit
Dunn, Cornelius E.....Detroit
Durocher, Edmund J.....Ecorse
Durocher, Normand E.....M
Dutchess, Charles E.....Detroit
Dwaihy, Paul .....Detroit
Dwyer, Francis .....M
Dysarz, T. T.....Detroit
Dziuba, John J.....M

Eades, Charles C.....M
Eakins, Frederick J.....Dearborn
Eaton, Crosby D.....Detroit
Eder, Joseph R.....M
Eder, Samuel J.....Detroit
Edgar, Irving I.....Detroit
Edgar, Russell G.....Detroit
Edwards, J. W.....Detroit
Eisman, Clarence H.....Detroit
Elliott, William G.....Detroit
Ellis, Seth W.....M
Elvidge, Robert J.....Detroit
Emmert, Herman C.....Detroit
Engel, Earl H.....M
Ensign, Dwight C.....Detroit
Ensing, Osborn .....Detroit
Epstein, S. G.....M
Erickson, Milton H.....Eloise
Erkfitz, Arthur W.....Detroit
Erman, Joseph M.....Detroit
Eschbach, Joseph W.....M
Estabrook, Bert U.....Detroit
Ettinger, Clayton J.....Detroit
Evans, Leland S.....Redford
Evans, William A., Jr.....M
Ewing, C. H.....M

Falick, Mordecai Louis.....M
Falk, Ira E.....Detroit
Fallis, Lawrence S.....Detroit
Fandrich, Theodore .....M
Farbman, Aaron A.....Detroit
Fauman, David H.....Detroit
Faunce, Sherman P.....Detroit
Fay, George E.....Detroit
Felcyn, W. George.....Detroit
Feldstein, Martin Z.....M
Fellers, Ray L.....Detroit
Fellman, Abraham R.....Detroit
Fenech, Harold B.....M
Fenton, E. H.....Detroit
Fenton, Meryl M.....M
Fenton, Russell F.....Detroit
Fenton, Stanley C.....Detroit
Ferguson, Franklin F.....M
Ferrera, Louis V.....M
Ferrara, Virginia M.....Detroit
Fettig, Carl A.....Detroit
Field, G. S.....Detroit
Finch, Alvis D.....Detroit
Fine, Edward .....Detroit
Fischer, Frederick J.....M
Fischer, Willard Earl.....M
Fisher, Edward F.....Dearborn
Fisher, George S.....M
Fisher, O. O.....Detroit
Fisher, R. L.....Detroit
Fitzgerald, E. W.....M
Fitzgerald, James M.....M
Flaherty, H. J.....Detroit
Flaherty, N. W.....M
Flaherty, S. A.....Detroit
Fleming, L. N.....Detroit
Flora, William R.....M
Flower, J. A.....Detroit
Fogt, Herbert E.....Detroit
Fogt, Robert G.....Detroit
Foley, Hugh S.....Dearborn
Font, Anthony J.....Detroit
Foote, James A.....Lincoln Park
Ford, F. A.....Detroit
Ford, George A.....Detroit
Ford, Sylvester .....M
Ford, Walter D.....Detroit
Fordell, F. S.....Detroit
Forrester, Alex V.....Detroit
Forsythe, John R.....M
Foster, E. Bruce.....M

Foster, Daniel P.....Detroit
Foster, Linus J.....Detroit
Foster, Owen C.....Detroit
Foster, William L.....Detroit
Foster, W. M.....Detroit
Fox, Morris Edward.....Dearborn
Franjac, M. J.....Detroit
Franzen, Nils A.....Detroit
Fraser, Eldred E.....Detroit
Fraser, Harvey E.....M
Fraser, Herman F.....Detroit
Frazer, Mary Margaret.....Detroit
Freedman, John .....M
Freedman, Milton .....Detroit
Freeman, D. K.....Detroit
Freeman, Mabel .....Detroit
Freeman, Thelma .....Detroit
Freeman, Wilmer .....Detroit
Freese, John A.....Detroit
Fremont, Joseph C.....M
Freund, Hugo A.....Detroit
Fried, Bernard H.....M
Friedlaender, Alex S.....M
Friedman, David .....Detroit
Friedman, I. H.....Detroit
Frostic, William D.....M
Frothingham, George E.....Detroit
Fuerbringer, Ralph O.....Detroit
Fuller, Hugh M.....M
Furey, Edward T.....Detroit

Gaba, Howard .....M
Gabe, Sigmund .....M
Gaberman, David B.....Detroit
Gaines, Sidney .....M
Galantowicz, H. C.....Detroit
Galdonyi, Laslo .....Detroit
Galdonyi, Nicholas .....Detroit
Galerneau, D. B.....Detroit
Gamble, Parker B.....Detroit
Gannan, Arthur M.....Detroit
Gariepy, L. J.....Detroit
Garner, Howard B.....Detroit
Gaston, Herbert B.....Dearborn
Gates, Nathaniel H.....Detroit
Gaynor, Alex .....Detroit
Gehring, Harold W.....Detroit
Gehrke, August E.....Detroit
Geib, Ledru O.....Detroit
Geib, Wayne A.....M
Geiter, Clyde W.....Detroit
Geitz, William A.....Detroit
Gellert, I. S.....Detroit
Gemeroy, J. C.....Detroit
George, A. W.....Detroit
Gerondale, E. J.....Detroit
Gibson, James C.....Detroit
Gigante, Nicola .....Detroit
Gignac, Arthur L.....Detroit
Gilbert, Harold R.....Wyandotte
Gillman, R. W.....Detroit
Gingold, Samuel M.....M
Gingrich, Wayne A.....M
Ginsberg, Harold I.....M
Gitlin, Charles .....M
Gittins, Perry C.....Detroit
Glasgow, Gordon K.....Detroit
Glassman, Samuel .....Detroit
Glazer, Walter S.....Detroit
Gleason, John E.....Detroit
Glees, J. L.....Grosse Pte. Farms
Glemet, Raymond B.....Detroit
Glick, Meyer J.....Detroit
Glickman, L. Grant.....M
Glowacki, B. F.....Detroit
Gmeiner, Clarence C.....Detroit
Goerke, Elmer A.....Romulus
Goetz, Angus G.....M
Goldberg, Arthur .....M
Goldberg, Harry H.....Detroit
Goldberg, Nathan H.....Detroit
Goldin, M. I.....M
Goldman, Perry .....M
Goldsmith, Joseph D.....Detroit
Goldstone, R. R.....Detroit
Gollman, Maurice D.....M
Gonne, William S.....Detroit
Good, William H.....M
Goodrich, B. E.....M
Gordon, John W.....Detroit
Gordon, William H.....M
Gorelick, Martin J.....M
Gorning, Raymond P.....Detroit
Gottschalk, Fred W.....Detroit
Gould, S. Emanuel.....Eloise
Goux, Raymond S.....Detroit
Grace, Joseph M.....Eloise
Graff, J. M.....Detroit
Graham, Julius A.....Detroit
Grain, Gerald O.....Detroit
Grajewski, Leo E.....Detroit
Gramley, William .....Detroit
Granger, Francis L.....Detroit
Grant, Heman E.....Detroit
Gratton, Henri L.....Detroit

Gratzek, Frank R. E.....Detroit
Gravelle, Lawrence J.....Detroit
Green, Ellis R.....Detroit
Green, Lewis .....Detroit
Green, Louis M.....M
Green, Simpson W.....Detroit
Green, Sydney H.....M
Greenberg, Julius J.....M
Greenberg, Morris Z.....M
Greene, John B.....Detroit
Greenidge, Robert .....Detroit
Greenlee, William Tate.....Detroit
Greiner, Bert A.....Detroit
Grekin, Joseph .....Detroit
Grekin, Samuel L.....Detroit
Griffith, Arthur J.....Detroit
Grimaldi, G. J.....M
Grob, Otto .....Detroit
Gronow, A. A.....Detroit
Grossman, Sol .....M
Gruber, T. K.....Eloise
Gruhzit, Oswald M.....
.....Grosse Pte. Shores
Guimaraes, A. S.....Dearborn
Gurdjian, E. S.....Detroit
Gutow, Benjamin R.....M
Hale, Arthur S.....Detroit
Hall, Arche C.....Detroit
Hall, E. Walter.....Detroit
Hall, James A. J.....Detroit
Hall, Ralph E.....Detroit
Hall, Robert J.....Detroit
Haluska, Joseph A.....Detroit
H'Amada, Norman K.....Detroit
Hamburger, A. C.....M
Hamilton, Norman C.....Detroit
Hamilton, Stewart .....Detroit
Hamilton, William .....Detroit
Hamilton, William F.....Detroit
Hammer, Charles A.....Detroit
Hammer, Edwin J.....Detroit
Hammer, Howard J.....M
Hammond, A. E.....Detroit
Hammond, James L.....Inkster
Hand, Fordus V.....Detroit
Hanna, Carl .....M
Hanna, E. Howard.....Detroit
Hanna, Samuel C.....Detroit
Hansen, Frederick E.....Detroit
Hanser, Joshua .....Detroit
Hanson, Frederick N.....M
Harelik, E. W.....Detroit
Hardstaff, R. John.....Detroit
Hardy, George C.....Detroit
Harkins, Henry R.....Detroit
Harley, Louis M.....Detroit
Harm, W. B.....Detroit
Harper, Jesse T.....M
Harrell, Voss .....Detroit
Harris, Albert E.....Detroit
Harris, Harold H.....M
Harrison, Hugh .....Detroit
Harrison, Wesley .....Detroit
Hart, Charles E.....M
Hart, J. Clarence.....M
Hartgraves, Hallie .....Detroit
Hartman, F. W.....Detroit
Hartmann, W. B.....Detroit
Hartzell, John B.....M
Hasley, Clyde K.....Detroit
Hasley, Daniel E.....Detroit
Hastings, Orville J.....Detroit
Hause, Glen E.....M
Hauser, I. Jerome.....M
Havers, Howard .....Detroit
Hawken, William C.....Detroit
Hawkins, James W.....Detroit
Hayes, Joseph D.....Detroit
Heath, Leonard P.....M
Heath, Parker .....Detroit
Heavner, L. E.....M
Hedges, Frank W.....Detroit
Hedrick, Donald W.....Detroit
Heenan, T. H.....Detroit
Heideman, Louis .....M
Heldt, Thomas J.....Detroit
Heller, Carl George.....Detroit
Hendelman, Manuel H.....Detroit
Henderson, A. B.....M
Henderson, Harold .....Detroit
Henderson, J. L.....Detroit
Henderson, Leslie T.....Detroit
Henderson, William E.....Detroit
Henderson, William W.....M
Henig, Fred .....M
Henrich, L. E.....Detroit
Herkimer, Dan R.....M
Herrold, Rose E.....Detroit
Herschelmann, Roy F.....M
Hershey, Lynn N.....Detroit
Hewitt, Leland V.....Detroit
Hewitt, Robert S.....M
Heyner, Stanley A.....Detroit
Hickey, Joseph .....Detroit
Higbee, Arthur L.....Detroit
Hileman, Lee .....Ecorse
Hillenbrand, Alfred E.....M
Hilton, William E.....Detroit
Hinko, Edward N.....M
Hipp, William .....Detroit
Hirshfeld, John W.....Detroit
Hirschman, L. J.....Detroit
Hochman, Morton M.....Detroit
Hodges, Roy W.....Detroit
Hodgkinson, C. P.....M
Hodoski, Frank J.....Detroit
Hoenig, Andrew L.....Detroit
Hoffman, E. S.....Detroit
Hoffman, Henry A.....M
Hoffman, Martin H.....Detroit
Holcomb, August A.....Northville
Hollander, A. J.....Detroit
Hollis, Henry B.....Detroit
Holman, Herbert H.....M
Holmes, A. W.....Detroit
Holt, Henry T.....Detroit
Holstein, A. P.....M
Honhart, Fred L.....Detroit
Honor, William H.....Wyandotte
Hoobler, B. Raymond.....Detroit
Hooker, Donald H.....M
Hookey, J. A.....Detroit
Hooper, Norman L.....Detroit
Hoopes, Benjamin F.....M
Hoops, George B.....Detroit
Hopkins, J. E.....Detroit
Horan, Thomas .....M
Horny, Hugo .....M
Horton, Reece H.....Detroit
Horvath, Louis O.....Detroit
Horwitz, John B.....M
Host, Lawrence N.....Detroit
Hotchkiss, Loris M.....Farmington
Howard, Austin Z.....Detroit
Howard, Philip J.....Detroit
Howell, Bert F.....Detroit
Howes, Willard Boyden.....Detroit
Hromadko, Louis .....Detroit
Hubbard, John P.....Detroit
Hubbard, Ralph G.....Detroit
Hudson, A. Willis.....Detroit
Hudson, J. Stewart.....Grosse Pointe
Hudson, William A.....Detroit
Huegli, Wilfred A.....M
Huff, Reginald G. .....Wayne
Hughes, Albertie A.....Detroit
Hughes, Ray W.....Detroit
Hull, L. W.....Detroit
Hunt, T. H.....Detroit
Hunter, Basil H.....Detroit
Hunter, C. M.....Detroit
Hunter, Elmer N.....Detroit
Husband, Charles W.....Detroit
Hyatt, Jarvis M.....M
Hyde, F. W.....Detroit
Iacobell, Peter H.....M
Ignatius, A. A.....Detroit
Ihle, Lyman E.....M
Insley, Stanley W.....Detroit
Irwin, W. A.....Detroit
Israel, Barney B.....M
Israel, J. G.....Detroit
Isbey, Edward K.....Detroit
Ivkovich, Peter .....M
Jacobson, Samuel D.....Eloise
Jacoby, Myron D.....Detroit
Jaeger, Grove A.....Detroit
Jaeger, Julius P.....Detroit
Jaekel, C. N.....Detroit
Jaffar, Donald J.....Detroit
Jaffe, J. L.....Detroit
Jaffe, Jacob .....Detroit
Jaffe, Louis .....M
James, L. Mae.....Detroit
Jahsman, William E.....Detroit
Jamieson, Robert C.....Detroit
Jarre, Hans A.....Detroit
Jarzynka, Frank J.....Dearborn
Jasion, Lawrence J.....M
Jend, William J.....Detroit
Jenkins, E. A.....M
Jenne, Byron H.....Detroit
Jennings, Alpheus F.....Detroit
Jennings, Robert M.....M
Jentgen, Charles J.....Detroit
Jentgen, L. G.....Detroit
Jewell, F. C.....Detroit
Jocz, Marion W.....Detroit
Jodar, E. O.....Detroit
John, Hubert R.....Detroit
Johnson, Homer L.....Detroit
Johnson, Ralph A.....Detroit
Johnson, R. M.....Detroit
Johnson, V. P.....Detroit
Johnson, Vincent C.....Detroit
Johnson, W. H. M.....Detroit
Johnston, Charles G.....Detroit
Johnston, Everett V.....Detroit
Johnston, J. A.....Detroit
Johnston, John L.....Detroit
Johnston, William E.....Detroit
Johnstone, B. I.....Detroit
Joinville, E. V.....Detroit
Jones, Arthur J.....Detroit
Jones, Adrian R.....Detroit
Jones, H. C.....M
Jones, L. Faunt.....Detroit
Jones, Roy D.....Detroit
Jonikaitis, Joseph J.....Detroit
Joyce, Stanley J.....M
Judd, C. Hollister .....Detroit
Juliar, Benjamin .....M
Jurow, Harry N.....Detroit

Kahn, William W.....Detroit
Kallet, Herbert I.....Detroit
Kallman, David .....Detroit
Kallman, Leo .....Detroit
Kallman, R. Robert.....M
Kaminski, L. R.....Detroit
Kaminski, Zeno L.....Detroit
Kamperman, George A.....Detroit
Kanter, Herman .....M
Kapetansky, A. J.....Detroit
Kapetansky, N. J.....Detroit
Kaplita, Walter A.....M
Karr, Herbert S.....Detroit
Kasaback, V. Y.....Detroit
Kasper, Joseph A.....Detroit
Kass, J. B.....Detroit
Kates, Simon C.....Detroit
Katzman, I. S.....Detroit
Kauffman, William .....M
Kaump, Donald H.....Detroit
Kay, Edward W.....Detroit
Kay, Harry H.....M
Kazdan, Louis .....M
Kazdan, Morris A.....M
Keane, William E.....Detroit
Kearns, Hubert J.....Detroit
Keemer, Edgar B.....Detroit
Keene, Clifford H.....M
Kehoe, Henry J.....East Detroit
Kelly, Edward W.....Detroit
Kelly, Frank A.....Detroit
Kemler, W. J.....Ecorse
Kennary, James M.....Detroit
Kennedy, Charles S.....Detroit
Kennedy, L. F.....Detroit
Kennedy, Robert B.....Detroit
Kenning, John C.....Detroit
Kenyon, Fanny H.....Detroit
Kern, W. H.....Garden City
Kernkamp, Ralph .....Detroit
Kernick, Melvin O.....M
Kersten, Armand G.....Detroit
Kersten, Werner .....Detroit
Keshishian, Sarkis K.....Detroit
Keyes, Eugene Charles.....Dearborn
Keyes, John W.....M
Kibzey, Ambrose T.....Detroit
Kidner, Frederick C.....Detroit
Kimball, David C.....M
Kimberlin, Kenneth K.....M
King, Edward D.....Detroit
King, Melbourne J.....M
Kingswood, Roy C.....Detroit
Kirchner, Augustus .....Detroit
Kirker, J. G.....Detroit
Kirschbaum, Harry M.....M
Klebba, Paul .....Detroit
Klein, William .....Detroit
Kleinman, S. .....Detroit
Kliger, David .....Detroit
Kline, Starr L.....Detroit
Kloeppel, C. S.....Detroit
Klosowski, Joseph .....Detroit
Klote, M. D.....Detroit
Knaggs, Charles W.....Grosse Pointe
Knaggs, Earl J.....M
Knapp, Byron S.....M
Knapp, Floyd .....Detroit
Knobloch, Edmund J.....Detroit
Knoch, Hubert S.....M
Knox, Ross M.....Ecorse
Koebel, R. H.....Detroit
Koerber, Edward J.....Detroit
Koessler, George L.....Detroit
Kohn, A. Max.....M
Kohn, M. E.....Detroit
Kokowicz, Raymond J.....M
Kolasa, W. B.....Detroit
Kopel, Joseph O.....Detroit
Korby, George J.....M
Kosanovic, Frederick .....M
Koss, Frank R.....M
Kossayda, Adam W.....M
Kovach, Emery P.....Detroit
Kovan, Dennis D.....M
Koven, Abraham .....Detroit
Kowalski, Valentine L.....M
Kozlinski, Anthony E.....M
Kraft, Raymond B.....Detroit
Kraft, Ruth M.....Detroit
Krass, Edward W.....M

Kraus, John J. ..... Detroit
Krebs, William T. ..... Detroit
Kretzschmar, C. A. ..... Detroit
Krieg, Earl G. ..... Detroit
Krieger, Harley L. ..... Detroit
Kreinbring, George E. ..... Detroit
Kritchman, M. J. ..... M
Kroha, Lawrence ..... Detroit
Krohn, Albert H. ..... Detroit
Krynicki, Francis X. ..... Detroit
Kubanek, Joseph L. ..... Eloise
Kuhn, Albert Arthur ..... M
Kuhn, Richard F. ..... M
Kulaski, Chester H. ..... Detroit
Kullman, Harold J. ..... M
Kurcz, J. A. ..... M
Kurtz, I. J. ..... Detroit
Kwasiborski, S. A. ..... Wyandotte

Laberge, James M. ..... M
LaCore, Ivan ..... M
Ladd, Graham B. ..... Detroit
La Ferte, Alfred D. ..... Detroit
Laird, Robert ..... Detroit
Lakoff, Charles ..... Detroit
Lam, Conrad R. ..... Detroit
Lamberson, Frank A. ..... Detroit
La Marche, N. O. ..... Detroit
Lammy, James V. ..... Royal Oak
Lampman, H. H. ..... Detroit
Landers, M. B., Sr. ..... Detroit
Landers, M. B., Jr. ..... Dearborn
Lang, Leonard W. ..... Detroit
Lange, Anthony H. ..... Detroit
Lange, William A. ..... M
Langohr, John L. ..... Detroit
Laning, George M. ..... Detroit
Lansky, Mandell ..... M
Lapham, Fred E. ..... M
Larsson, Bror H. ..... Detroit
Lash, Michael William ..... Detroit
Lasley, James William ..... Detroit
Lassaline, S. J. ..... Detroit
Lathrop, Philip L. ..... Detroit
Laub, Stanley V. ..... M
Lauppe, Edward H. ..... Detroit
Lauppe, F. A. ..... M
Law, John H. ..... Detroit
Leach, David ..... M
Lawrence, William C. ..... Detroit
Lazar, Morton R. ..... M
Leacock, Robert C. ..... Detroit
Leader, L. R. ..... Detroit
Leaver, L. Ross ..... Detroit
Leckie, George C. ..... Detroit
Ledwidge, Patrick L. ..... Detroit
Lee, Harry E. ..... Detroit
LeGallee, George M. ..... M
Lehman, William L. ..... M
Leibinger, H. R. ..... Detroit
Leipsitz, Louis S. ..... M
Leiser, Rudolf ..... Eloise
Leithauser, D. J. ..... Detroit
Leland, Sol ..... M
Lemley, Clark ..... Detroit
Lemmon, Charles E. ..... M
Lemmon, Clarence W. ..... River Rouge
Lentine, James J. ..... M
Lenz, Willard R. ..... Detroit
Lepley, Fred O. ..... Detroit
Lescohier, Alex W. ..... Grosse Pointe
L'Esperance, Simon P. ..... Detroit
Leszynski, J. S. ..... Detroit
Leucutia, Traian ..... Detroit
Levant, Arthur B. ..... M
Levin, David M. ..... M
Levin, Michael M. ..... M
Levin, Samuel J. ..... M
Levine, Sidney S. ..... Detroit
Levitt, Nathan ..... Detroit
Levy, Marvin B. ..... Detroit
Lewin, Harry ..... Detroit
Lewis, Charles T. ..... Detroit
Lewis, David H. ..... Detroit
Lewis, L. A. ..... Detroit
Lewis, J. Hugh ..... M
Lewis, Wilfred John ..... M
Libbrecht, Robert V. ..... Detroit
Lichter, M. L. ..... Detroit
Lichtwardt, Hartman A. ..... Detroit
Lieberman, B. L. ..... Detroit
Liddicoat, A. G. ..... Detroit
Lightbody, James J. ..... Detroit
Lignell, Rudolph ..... Detroit
Lilly, Charles J. ..... Detroit
Lilly, Vernon S. ..... Detroit
Linton, James R. ..... Eloise
Lipinski, Stanley L. ..... Detroit
Lipkin, Ezra ..... Detroit
Lippold, Paul H. ..... Detroit
Lipschutz, Louis S. ..... Detroit
Livingston, George D. ..... M
Lockwood, Bruce C. ..... Detroit
Lofstrom, James E. ..... M
Long, Earle C. ..... Detroit
Long, John J. ..... M
Loranger, C. B. ..... Detroit
Loranger, Guy L. ..... M
Lorber, Joseph H. ..... M
Lord, Herman M. ..... M
Lorentzen, Edwin H. ..... Detroit
Lovas, W. S. ..... M
Love, W. Thomas ..... Detroit
Lovering, Wm. J. ..... Detroit
Lowrie, G. B. ..... Detroit
Lowrie, Wm. L., Jr. ..... Detroit
Lowry, George L. ..... Detroit
Luce, Henry A. ..... Detroit
Lum, Thomas Kion ..... M
Lutz, Earl F. ..... Detroit
Lynch, E. J. ..... Detroit
Lynn, David H. ..... Detroit
Lynn, Harvey D. ..... Detroit

Mabee, Frank P. ..... Detroit
Mabley, J. Donald ..... M
MacArthur, Robert A. ..... Detroit
MacCracken, Frances L. ..... Detroit
MacFarlane, Howard W. ..... Detroit
MacGregor, W. W. ..... Detroit
Mack, Harold C. ..... M
MacKenzie, Earle D. ..... Detroit
MacKenzie, Frank M. ..... Detroit
Mackenzie, John W. ..... Grosse Pointe
Mackersie, W. G. ..... Detroit
MacMillan, Francis B. ..... Detroit
MacMillan, James M. ..... M
MacMullen, Frank B. ..... Detroit
MacQueen, Malcolm D. ..... Detroit
Maczewski, John E. ..... Detroit
Magnell, Ralph C. ..... Detroit
Maguire, Clarence E. ..... Detroit
Mahlatjie, Nathaniel M. ..... Detroit
Mahoney, Hugh M. ..... Detroit
Maibauer, F. P. ..... M
Maire, E. D. ..... M
Mair, Harold U. ..... M
Malachowski, B. T. ..... Detroit
Malik, Edward A. ..... Detroit
Malik, Nur M. ..... Detroit
Malina, Stephen ..... Detroit
Malone, Herbert ..... Detroit
Maloney, John A. ..... Detroit
Mancuso, Vincent ..... Detroit
Mandiberg, Jack N. ..... M
Manning, Morey H. ..... Detroit
Manting, J. ..... Detroit
Maples, Douglas E. ..... M
Marcotte, Oliver ..... Detroit
Marcus, Daniel B. ..... Detroit
Marinus, Carleton J. ..... Detroit
Marion, Donald F. ..... M
Mark, Jerome ..... M
Markoe, Rupert C. L. ..... Detroit
Marks, Ben ..... M
Marks, Morris ..... Detroit
Marsden, Thomas B. ..... Detroit
Marsh, Alton R. ..... Detroit
Marshall, James R. ..... Detroit
Martin, Edward G. ..... Detroit
Martin, Elbert A. ..... Detroit
Martin, I. Herbert ..... Detroit
Martin, J. B., Jr. ..... Detroit
Martin, L. R. ..... Detroit
Martin, H. M. ..... Detroit
Martin, Wm. C. ..... Detroit
Martinez, P. O. ..... Detroit
Martmer, Edgar ..... M
Marwil, T. B. ..... M
Mason, Percy W. ..... Detroit
Massengile, Cleave ..... Detroit
Mateer, John G. ..... Detroit
Mathes, Charles J. ..... Detroit
Matthews, Wallace R. ..... Dearborn
Maun, Mark E. ..... Detroit
May, Earl W. ..... Detroit
May, Frederick T., Jr. ..... M
Mayer, E. V. ..... Detroit
Mayer, Willard D. ..... Detroit
Mayme, C. H. ..... M
McAfee, F. W. ..... Detroit
McAlonan, Wm. T. ..... Detroit
McAlpine, Gordon S. ..... Detroit
McClellan, G. L. ..... Detroit
McClellan, Robert J. ..... Detroit
McClendon, James J. ..... Detroit
McClintock, J. J. ..... Detroit
McClure, Robert W. ..... M
McClure, Roy D. ..... Detroit
McClure, Wm. R. ..... Detroit
McColl, Charles W. ..... M
McColl, Clarke M. ..... Detroit
McColl, Kenneth M. ..... Detroit
McCollum, E. B. ..... M
McCord, Carey P. ..... Detroit
McCormick, Colin C. ..... Dearborn
McCormick, Crawford W. ..... Detroit
McCormick, Frank ..... Detroit
McCullough, Lester E. ..... Detroit
McDonald, Allan W. ..... Detroit
McDonald, Angus L. ..... Detroit
McDonald, George O. ..... Detroit
McDonald, Peter W. ..... M
McDougall, Bernard W. ..... Detroit
McGarvah, A. W. ..... Detroit
McGarvah, Joseph A. ..... M
McGavran, Harry G. ..... Detroit
McGinnis, Daniel H. ..... Detroit
McGlaughlin, Nicholas D. ..... M
McGough, Joseph M. ..... M
McGraw, Arthur B. ..... M
McQuiggan, Paul ..... M
McGuire, M. Ruth ..... Detroit
McIntosh, W. V. ..... Detroit
McKean, G. Thomas ..... M
McKean, Richard M. ..... M
McKenna, Chas. J. ..... M
McKinnon, John D. ..... Detroit
McLane, Harriett E. ..... Detroit
McLean, Don W. ..... M
McLean, Harold G. ..... Detroit
McPherson, R. J. ..... Detroit
McQuiggan, Mark B. ..... Detroit
McRae, Donald H. ..... Detroit
Mead, John ..... Detroit
Meader, F. M. ..... Detroit
Meek, Stuart F. ..... Detroit
Meinecke, Helmuth A. ..... Detroit
Mellen, Hyman S. ..... Detroit
Menagh, Frank R. ..... Detroit
Mendelssohn, R. J. ..... Detroit
Merkel, Chas. C. ..... Grosse Pointe
Merrill, Wm. C. ..... Detroit
Merritt, Earl G. ..... Detroit
Metzger, Harry C. ..... Detroit
Meyer, Ruben ..... Detroit
Meyers, M. P. ..... M
Meyers, Solomon G. ..... M
Miley, H. H. ..... Detroit
Miller, Daniel H. ..... Detroit
Miller, Harry A. ..... M
Miller, Hazen L. ..... Detroit
Miller, Karl ..... M
Miller, Maurice P. ..... Trenton
Miller, Myron H. ..... Detroit
Miller, T. H. ..... M
Miller, Wm. Ernest ..... Detroit
Mills, Clinton C. ..... M
Mills, Georgia V. ..... Detroit
Mintz, Edward I. ..... Detroit
Miral, Solomon P. ..... Detroit
Mishelevich, Sophie ..... Detroit
Mitchell, C. Leslie ..... Detroit
Mitchell, Gertrude F. ..... Detroit
Mitchell, W. Bede ..... M
Moehlig, Robert C. ..... Detroit
Moisides, V. P. ..... Detroit
Moll, Clarence D. ..... Detroit
Molner, Joseph G. ..... Detroit
Moloney, J. Clark ..... M
Mond, Edward ..... Detroit
Monfort, Willard ..... Detroit
Montgomery, John C. ..... Detroit
Montante, Jos. R. ..... M
Moorehead, Matthew T. ..... Detroit
Morand, Louis J. ..... Detroit
Morgan, Donald Nye ..... Detroit
Moriarty, George ..... Detroit
Morin, John B. ..... Detroit
Moritz, H. C. ..... Detroit
Morley, Harold V. ..... M
Morley, James A. ..... Detroit
Morris, Harold L. ..... Detroit
Morrison, Marjorie G. E. ..... Detroit
Morse, Plinn F. ..... Detroit
Morton, David G. ..... M
Morton, J. B. ..... Detroit
Mosee, W. Jones ..... Detroit
Mosen, Max M. ..... Detroit
Moss, E. B. ..... Detroit
Moss, Nathan H. ..... Detroit
Mott, Carlin P. ..... Detroit
Muellenhagen, Walter J. ..... Detroit
Munson, F. T. ..... Detroit
Muntyan, Andrew ..... Detroit
Murphy, D. J. ..... M
Murphy, Frank J. ..... M
Murphy, John M. ..... M
Murphy, Scipio G. ..... Detroit
Murphy, W. M. ..... Detroit
Murray, George M. ..... Detroit
Murray, William A. ..... Detroit
Muske, Paul H. ..... M
Musser, Fred C. ..... Detroit
Myers, Geo. P. ..... Detroit
Myers, Gordon B. ..... Detroit

Nagel, Oscar ..... M
Nagle, John W. ..... Detroit
Naud, Henry J. ..... Detroit
Nawotka, E. E. ..... Detroit
Naylor, A. E. ..... Detroit
Naylor, Arthur H. ..... Detroit
Neeb, Walter G. ..... M

Nelson, Harry M.....Detroit
Nelson, Margaret E.....Detroit
Nelson, Victor E.....M
Neumann, Arthur J.....Detroit
Newbarr, Arthur A.....Detroit
Newcomer, Sheldon R.....M
Newman, Max Karl.....Detroit
Nielsen, Aage E.....M
Nichamin, Samuel J.....M
Nickels, Albert W.....M
Nickerson, Dean .....M
Nigro, Norman D.....M
Nill, John B.....Detroit
Nill, Wm. F.....Detroit
Noer, Rudolf J.....M
Nolting, Wilfred S.....M
Norconk, A. A.....M
Norris, Edgar H.....Detroit
Northrop, Arthur K. .....Detroit
Norton, A. B.....Detroit
Norton, Chas. S.....Detroit
Novy, R. L.....Detroit
Nowicki, Joseph A.....Detroit

O'Brien, E. J.....Detroit
O'Brien, G. M.....Detroit
O'Donnell, David H.....Detroit
O'Donnell, Dayton H.....M
Ohmart, Galen B.....Detroit
O'Hora, James T.....Detroit
Olenikoff, Alex .....M
Olechowski, Leo W.....M
Olmsted, William R.....Detroit
Olney, H. E.....Detroit
Oman, Cyrus F.....Detroit
Oppenheim, J. M.....M
Oppenheim, Milton M...Highland Park
Organ, Fred W.....Detroit
Ormond, John K.....Detroit
Orecklin, L. .....Detroit
O'Rourke, Paul V.....Detroit
O'Rourke, Randall M.....Detroit
Osius, Eugene A.....M
Ott, Harold A.....M
Ottaway, John P.....M
Ottrock, Anton .....Detroit
Owen, Clarence I.....M
Owen, Samuel H. G.....Detroit

Palmer, Alice .....Detroit
Palmer, Hayden .....Detroit
Palmer, R. Johnston.....Detroit
Palmerlee, George H.....Detroit
Pangburn, L. E.....Detroit
Panzner, Edward J.....Detroit
Parker, Albert R.....Detroit
Parker, Benjamin R.....M
Parker, Walter R.....Detroit
Parr, R. W.....Detroit
Parsons, John P....Grosse Pointe Park
Pasternacki, Norbert T.....Detroit
Paterson, Walter G.....Detroit
Patton Henry S.....Detroit
Pawlowski, Jerome .....Detroit
Paysner, Harry A.....Detroit
Peabody, Chas. Wm.....Detroit
Peacock, Lee W.....Highland Park
Pearse, Harry A.....Detroit
Peggs, George F.....M
Peirce, Howard W.....Detroit
Penberthy, G. C.....M
Pensler, Meyer .....M
Pequegnot, Chas. F.....Detroit
Perdue, Grace M.....Detroit
Perkin, Frank S.....M
Perkins, Ralph A.....Detroit
Perlis, H. L.....Detroit
Perry, Alvin LaForge.....M
Peterman, Earl A.....Detroit
Petix, Samuel C.....Detroit
Pevin, Pauline .....Detroit
Pfeiffer, Rudolph L.....Detroit
Phillips, Fred W.....Detroit
Pickard, Orland W.....Detroit
Pierce, Frank L.....Detroit
Pierson, Max J.....Detroit
Pinckard, Karl G.....Detroit
Pink, Rose M.....Detroit
Pinney, Lyman J.....Detroit
Pino, Ralph H.....Detroit
Piper, Clark C.....Detroit
Piper, Ralph R.....Detroit
Plaggemeyer, H. W.....Detroit
Pliskow, Harold .....M
Podezwa, John W.....M
Pollack, John J.....Detroit
Poole, Marsh W.....M
Poos, Edgar .....Detroit
Porretta, Anthony C.....Detroit
Porretta, F. S.....Detroit
Porter, Howard J.....Romulus
Portnoy, Harry .....Detroit
Potts, E. A.....Detroit
Posner, Irving .....Detroit
Potter, Marcia .....Detroit
Pratt, Jean P.....Detroit
Pratt, Lawrence .....M
Priborsky, Benj. H.....Detroit
Price, A. H.....Detroit
Price, Alvin E.....M
Proctor, Bruce .....Detroit
Proud, Robert H.....Detroit
Ptolemy, H. H.....Detroit
Pugliesi, Benedetto .....Detroit
Purcell, Frank H.....Detroit
Putra, A. M.....M
Pyle, Wynand .....Detroit

Quigley, Wm. .....Detroit

Rahm, Lambert P.....M
Raiford, Frank P.....Detroit
Rand, Morris .....Detroit
Rao, John O.....Detroit
Raskin, John .....Detroit
Rastello, Peter B.....Detroit
Ratigan, C. S.....Detroit
Raynor, Harold F.....Detroit
Reed, H. Walter.....Detroit
Reed, Ivor E.....Detroit
Rees, Howard C.....Detroit
Reid, Wesley G.....M
Reiff, Morris V.....M
Reinbolt, Chas. A.....Detroit
Reinsh, Ernest R.....M
Reisman, Nathan J.....Detroit
Rekshaw, W. R.....Detroit
Renaud, G. L.....Detroit
Rennell, Leo P.....Detroit
Renz, Russell H.....Detroit
Repp, Wm. A.....Detroit
Reske, Alven .....M
Reveno, Wm. S.....Detroit
Rexford, Walton K.....Detroit
Reye, H. A.....Detroit
Reyner, C. E.....Detroit
Reynolds, Lawrence .....Detroit
Reynolds, R. P.....Detroit
Rezanka, Harold J.....Detroit
Rhoades, F. P.....Detroit
Rice, Clair M., Jr.....M
Rice, Harold B.....Detroit
Rice, Meshel .....Detroit
Richards, R. Milton.....Detroit
Richardson, Allan L.....Detroit
Richardson, Robert P.....Detroit
Rick, Paul J.....Detroit
Ridge, Ralph W.....Detroit
Ridley, Ed. R.....Detroit
Rieckhoff, George G.....Detroit
Rieger, John B.....Detroit
Rieger, Mary H.....Detroit
Riseborough, E. C.....Detroit
Rizzo, Frank .....Detroit
Robb, Edw. L.....Detroit
Robb, Herbert F.....Detroit
Robb, J. M.....Detroit
Robbins, Edward R.....Detroit
Roberts, Arthur J.....Detroit
Roberts, Frederick J.....Detroit
Robertson, Stanley B.....Detroit
Robertson, Tom H.....Detroit
Robillard, Henry.....Detroit
Robins, Samuel C.....Detroit
Robinson, George W.....Detroit
Robinson, Harold A.....M
Robinson, R. G.....Detroit
Rogers, A. Z.....Detroit
Rogers, James D.....Detroit
Rogin, James R.....Detroit
Rogoff, A. S.....M
Rohde, Paul C.....Detroit
Rom, Jack .....M
Roman, Stanley J.....M
Roney, Eugene H.....M
Root, Chas. T.....M
Rosbolt, Oscar P.....Detroit
Rose, Bernard .....Detroit
Rosefield, John L.....Detroit
Rosen, Robert .....Detroit
Rosenberger, Homer .....M
Rosenman, J. D.....Detroit
Rosenthal, Louis H.....M
Rosenthal, M. J.....Detroit
Rosenzweig, Saul .....Detroit
Ross, D. G.....Detroit
Ross, Ben C.....M
Ross, Samuel H.....M
Roth, Edward T.....Detroit
Roth, Theodore I.....M
Rotarius, E. M.....Detroit
Rothbart, H. B.....Detroit
Rothman, Emil D.....Detroit
Rothstein, Hyman .....M
Rottenberg, Leon .....M
Rowda, Michael S.....Detroit
Rowell, Robert C.....Detroit
Rowell, Wilfred J.....M
Rubright, Leroy W.....M
Rucker, Julian J.....Detroit
Rueger, Milton J.....M
Rueger, Ralph C.....Detroit
Rupprecht, Emil F.....M
Ruskin, Samuel H.....Detroit
Russell, John C.....Detroit
Ryan, Charles F.....Detroit
Ryan, W. D.....Detroit
Rydzewski, Jos. B.....Detroit
Ryerson, Frank L. .....Detroit

Sachs, Herman K.....M
Sack, A. G.....M
Sadowski, Roman .....Detroit
Sage, Edward O.....Detroit
Sager, E. L.....Detroit
St. Louis, R. J.....Detroit
Salchow, Paul T.....Detroit
Salowich, John N.....Detroit
Saltzstein, Harry C.....Detroit
Sander, I. W.....Detroit
Sanders, Alex W.....Detroit
Sanderson, Alvord R.....Detroit
Sanderson, James H.....Detroit
Sanderson, Joseph L.....Detroit
Sanderson, Suzanne .....Detroit
Sandler, Nathaniel .....M
Sands, G. E.....Detroit
Sandweiss, D. J.....Detroit
Sanford, Hawley S.....M
Sargent, William R.....Detroit
Sauk, John J.....M
Sauter, Simon H.....Detroit
Savignac, Eugene M.....Detroit
Sawyer, Harold F.....M
Scarney, Herman D.....M
Schaefer, Robert L.....M
Schaeffer, Martin .....Detroit
Schenden, A. J.....Melvindale
Schiller, A. E.....Detroit
Schillinger, Harold K.....Dearborn
Schinagel, Geza .....Detroit
Schirack, Ray .....Detroit
Schlacht, George F.....Romulus
Schlafer, Nathan H.....Detroit
Schlemer, John H.....Detroit
Schmidt, Harry E.....M
Schmidt, J. Robert.....M
Schmidt, Milton R.....M
Schmier, Burton L.....Detroit
Schmitt, Norman L.....Detroit
Schneck, R. J.....Detroit
Schneider, Curt P.....M
Schoenfield, Gilbert D.....Detroit
Schooten, Sarah S.....Detroit
Schreiber, Frederick .....Detroit
Schroeder, Carlisle F.....M
Schulte, Carl H.....Detroit
Schultz, Ernest C.....Detroit
Schultz, Robert F.....M
Schwartz, Ben .....Detroit
Schwartz, H. Allen.....Detroit
Schwartz, Louis A.....M
Schwartz, Oscar D.....M
Schwartzberg, Joseph A.....M
Schweigert, C. F.....M
Sciarrino, Stanley V.....Detroit
Scott, J. W.....Detroit
Scott, R. J.....M
Scott, William J...Grosse Pointe Farms
Scruton, Foster D.....Detroit
Seabury, Frank P.....Detroit
Secord, Eugene W.....Detroit
Seeley, James B.....Dearborn
Seeley, Ward F.....Detroit
Segar, Lawrence F.....Detroit
Seibert, Alvin H...Grosse Pointe Park
Selby, C. D.....Detroit
Seliady, Joseph E.....M
Sellers, Graham .....Detroit
Selling, Lowell .....Detroit
Selman, J. H.....Detroit
Sewell, George .....Detroit
Seymour, William J.....Detroit
Shafarman, Eugene .....Detroit
Shaffer, Carl F.....Detroit
Shaffer, Joseph H.....M
Shaffer, Loren W.....Detroit
Shafter, Royce R.....Detroit
Shankwiler, Reed A.....Detroit
Shapiro, Reuben I.....Detroit
Sharp, Helen C.....Detroit
Sharrer, Charles H.....Detroit
Shaw, Robert G.....Detroit
Shawan, Harold K.....Detroit
Shebasta, Bessey Heald.....Detroit
Shebasta, Emil .....M
Sheldon, John A.....Detroit
Shelton, C. F.....M
Sheppard, Emma L. W.....Detroit
Sheppard, William B.....M
Sheridan, Charles R.....Detroit
Sherman, B. B.....Detroit
Sherman, William L.....Detroit
Sherrin, Edgar R.....M
Sherwood, DeWitt L.....Detroit
Shewchuk, Alexander P.....M
Shields, William L.....Detroit
Shifrin, Peter G.....M

Shipton, W. Harvey.....Detroit
Shlain, Benjamin .....Detroit
Shore, O. J.....Detroit
Shotwell, Carlos W.....Detroit
Shulak, Irving B.....M
Shurly, Burt R.....Detroit
Siddall, Roger S.....Detroit
Sieber, Edward H.....Dearborn
Siefert, John L.....M
Siefert, William A.....Detroit
Siegel, Henry .....M
Sill, Henry W.....Detroit
Silvarman, I. Z.....Detroit
Silver, Israel W.....Detroit
Silverman, M. M.....Detroit
Simon, Emil R.....Detroit
Simons, Edward J.....M
Simpson, C. E.....Detroit
Simpson, H. Lee.....Detroit
Sippola, George W.....Detroit
Sisson, John M.....Detroit
Skinner, Edward F.....Detroit
Skinner, W. Clare.....Detroit
Skolnick, Max H.....M
Skrzycki, Stephen S.....Detroit
Skully, E. J.....Detroit
Skully, G. A.....M
Sladen, Frank J.....Detroit
Slate, Raymond N.....Detroit
Slaughter, Fred M.....Detroit
Slaugenhaupt, J. G.....Detroit
Slazinski, Leo W.....Detroit
Slevin, John G.....M
Slipson, Edith G.....Detroit
Sliwin, Edward P.....M
Small, Henry .....M
Smeck, Arthur R.....Detroit
Smeltzer, Merrill .....M
Smith, F. Janney.....Detroit
Smith, Fred R.....M
Smith, Gerrit Calvin.....Detroit
Smith, Henry L.....Detroit
Smith, J. Allen.....Detroit
Smith, James A.....Detroit
Smith, J. Campbell.....Detroit
Smyth, Charley J.....Eloise
Snedeker, Bernard C.....M
Snow, L. W.....Northville
Snyder, Arthur M.....Detroit
Sobin, David J.....Detroit
Socall, Charles J.....M
Sokolov, Raymond A.....Detroit
Somers, Donald C.....M
Sonda, Lewis P.....Detroit
Sorock, Milton L.....M
Souda, Andrew .....Wyandotte
Spademan, Loren C.....Detroit
Spalding, Edward D.....M
Sparks, J. H.....Detroit
Sparling, Harold I.....M
Sparling, Irene L.....Northville
Speck, Carlos C.....Ecorse
Spector, Maurice J.....M
Spencer, Frank .....Detroit
Spero, Gerald D.....Detroit
Sperry, Frederick L.....Detroit
Spiro, Adolph .....M
Springborn, B. R.....Detroit
Sprunk, Carl .....M
Sprunk, John P.....Detroit
Spurrier, Ethelbert .....Detroit
Squires, W. H.....Eloise
Stafford, Frank W. J.....Detroit
Stageman, John C.....M
Stalker, Hugh .....Grosse Pointe
Stamell, Meyer .....M
Stamos, Harry F.....M
Stanton, James M.....Detroit
Stapleton, William J., Jr.....Detroit
Starrs, Thomas C.....Detroit
Stefani, E. L.....Detroit
Stefani, Raymond T.....M
Steffes, Everett M.....M
Stein, Albert H.....M
Stein, Emory .....Detroit
Stein, James R.....Ferndale
Stein, Saul C.....M
Steinbach, Henry B.....Detroit
Steinberger, Eugene .....Detroit
Steiner, Louis J.....Detroit
Steiner, Max .....M
Steinhardt, Milton J.....M
Stellhorn, Chester E.....Detroit
Stellhorn, Mary Christine.....Detroit
Sterling, Lawrence .....Detroit
Sterling, Robert R.....Detroit
Stern, Edward A.....Detroit
Stern, Harry L.....Detroit
Stern, Leonard H.....Detroit
Stern, Louis D.....Detroit
Stevens, Rollin H.....Detroit
Stewart, Thomas O.....Detroit
Stirling, Alex M.....Detroit
Stobbe, Godfrey D.....M
Stockwell, B. W.....M
Stofer, Bert E.....Detroit
Stokfisz, T. .....Detroit
Stolz, Harold F.....Detroit
Stout, Lindley H.....Detroit
Straith, Claire L.....Detroit
Stricker, Henry D.....Detroit
Strickroot, Fred L.....M
Strohschein, Don F.....Detroit
Stubbs, C. T.....Detroit
Stubbs, Harold W.....Detroit
Sugar, David I.....Detroit
Sugarman, Marcus H.....M
Sullivan, Hugh A.....Detroit
Summers, William S.....Detroit
Surbis, John P.....Detroit
Sutherland, J. M.....Detroit
Swanson, Carl W.....Detroit
Swanson, C. N.....Detroit
Swartz, J. N.....Detroit
Swift, Karl L.....Detroit
Switzer, Bertrand C.....Detroit
Syphax, Charles S., Jr.....Detroit
Szappanyos, Bela T.....Detroit
Szedja, J. C.....M
Szilagyi, Emerick D.....Detroit
Szlachetka, V. E.....M
Szmigiel, A. J.....Detroit

Tamblyn, E. J.....Detroit
Tann, H. E.....Detroit
Tapert, Julius C.....Detroit
Tasker, Helen .....Detroit
Tatelis, Gabriel .....Detroit
Taylor, Ivan B.....M
Taylor, Nelson M.....M
Taylor, Reu Spencer.....Detroit
Tear, Malcolm J.....M
Teitelbaum, Myer .....M
Tenagha, Thomas A.....M
Tenerowicz, Rudolph G.....
Washington, D. C.
Test, Frederick C., II.....Detroit
Texter, Elmer C.....Detroit
Thomas, Alfred E.....Detroit
Thomas, Delma F.....Detroit
Thomas, Fred W.....Detroit
Thompson, David L.....Detroit
Thompson, H. E.....Detroit
Thompson, H. O.....M
Thompson, James B.....Detroit
Thompson, W. A.....Detroit
Thomson, Alexander .....Detroit
Thosteson, George C.....Detroit
Thurston, Roger G.....M
Tichenor, E. D.....Detroit
Tomsu, Charles L.....Detroit
Top, F. H.....Detroit
Torrey, H. N.....Detroit
Townsend, Frank M.....Detroit
Townsend, Kyle E.....Detroit
Trask, Harry D.....Detroit
Tregenza, W. Kenneth.....Detroit
Trinity, Granville J.....Detroit
Troester, George A.....M
Trombley, Bryan .....Detroit
Trombley, Joseph J., Jr.....M
Troxell, Emmett C.....Detroit
Truog, Clarence P.....M
Truszkowski, E. G.....M
Trythall, S. W.....Detroit
Tufford, Norman G.....Detroit
Tulloch, John .....M
Tupper, Roy D.....Detroit
Turbett, Claude W.....Detroit
Turcotte, Vincent J.....Detroit
Turkel, Henry .....Detroit
Turner, Alexander L.....Detroit
Tyson, William E. E.....Detroit

Ujda, Chester J.....Detroit
Ulbrich, Henry L.....Detroit
Ulch, Harold W.....Detroit
Ulrich, Willis H.....M
Umphrey, Clarence E.....Detroit
Usher, William Kay.....Detroit

Vale, C. Fremont.....Detroit
VanBaalen, M. R.....Detroit
Van Becelaere, L. H.....Ecorse
Van de Velde, Honore.....Detroit
VanGundy, Clyde R.....Detroit
Van Heldorf, Harry.....Detroit
Van Nest, A. E.....Detroit
Van Rhee, George.....Detroit
Vardon, Edward M.....Detroit
Vasu, V. O.....Detroit
Vergosen, Harry E.....M
Vincent, J. LeRoi.....M
Voegelin, Adolph E.....Detroit
Voelkner, George H.....Detroit
Vogel, Hymen A.....Detroit
Vokes, Milton D.....Detroit
Von der Heide, E. C.....Detroit
Voorheis, Wilbur J.....Detroit
Vossler, A. E.....Detroit
Vreeland, C. Emerson.....Detroit

Waddington, Joseph E. G.....Detroit
Wadsworth, George H.....M
Waggoner, C. Stanley.....Detroit
Waggoner, Lyle G.....Detroit
Wainger, M. J.....Detroit
Waldbott, George L.....Detroit
Walker, Enos G.....M
Walker, J. Paul.....Detroit
Walker, Roger V.....Detroit
Wallace, S. Willard.....M
Walls, Arch .....Detroit
Walser, Howard Carleton.....Detroit
Walsh, Charles R.....Detroit
Walsh, Francis P.....Detroit
Walters, Albert G.....Detroit
Waltz, Frank D. B.....Detroit
Wander, William G.....Detroit
Ward, W. K.....Detroit
Warden, Horace F. W.....Detroit
Warner, P. L. .....Detroit
Warren, Wadsworth .....M
Wasserman, Lewis C.....Detroit
Waszak, Charles J.....Detroit
Watson, Douglas J.....M
Watson, Harwood G.....Detroit
Watson, J. Edwin.....Detroit
Watson, Robert W.....Highland Park
Watters, F. L.....M
Watts, Frederick B.....M
Watts, John J.....Detroit
Wax, John H.....M
Wayne, M. A.....Detroit
Weaver, Clarence E.....Detroit
Webster, John E.....M
Weed, Milton R.....M
Wehenkel, Albert M.....Detroit
Weiner, M. B.....Detroit
Weingarden, David H.....Detroit
Weisberg, A. Allen.....M
Weisberg, Jacob .....M
Weisenthal, Irvin .....Detroit
Weiser, Frank A.....Detroit
Weiss, J. G.....M
Welch, John H.....Detroit
Weller, Charles N.....Detroit
Wellman, Waldron W.....Detroit
Wells, Martha .....Detroit
Weltman, Carl .....Detroit
Wendel, Jacob S.....Detroit
Wenzel, Jacob F.....Detroit
Wershow, Max .....Detroit
West, Howard Gaige.....Detroit
Weston, Bernard .....Detroit
Weston, Earl E.....Highland Park
Weston, Horace L.....M
Westover, Charles .....Plymouth
Weyher, Russell F.....Detroit
Whalen, Neil J.....Detroit
Whinnery, Randall A.....Detroit
White, Milo R.....Detroit
White, Milton W.....Detroit
White, Prosper D., Jr.....M
White, Theodore M.....Detroit
Whitehead, L. S.....M
Whitehead, Walter K.....Detroit
Whiteley, Robert K.....M
Whitney, Elmer L.....Detroit
Whitney, Rex E.....M
Whittaker, Alfred H.....Detroit
Wiant, R. E.....Detroit
Wickham, A. B.....Detroit
Wiechowski, Henry E.....M
Wiener, I. .....M
Wight, Fred B.....Detroit
Wilcox, L. F.....M
Wilkinson, A. P.....Detroit
Williams, C. J.....Detroit
Williams, Mildred C.....Detroit
Williamson, Edwin M.....M
Williamson, John G.....Dearborn
Wills, J. N.....Detroit
Willson, Wesley W.....M
Wilson, Charles Stuart.....Detroit
Wilson, Gerald A.....Detroit
Wilson, James Leroy.....Detroit
Wilson, John D.....Detroit
Wilson, M. C.....M
Wilson, Walter J.....Detroit
Wilson, Walter J., Jr.....M
Winfield, James M.....M
Winsor, Carleton .....M
Wiren, Lennart W.....Eloise
Wiskropp, E. A.....M
Wisner, Harold E.....Detroit
Wissman, H. C.....Detroit
Wittenberg, Arthur A.....Detroit
Wittenberg, Samson S.....Detroit
Wittenberg, Sydney S.....Detroit
Witter, Joseph A.....M
Witwer, Eldwin R.....Grosse Pte. Park
Wolfe, Max O.....Detroit
Wollenberg, R. A. C.....Detroit
Wood, Kenneth A.....Detroit
Woodry, Norman L.....Detroit
Woods, H. B.....Detroit

Woods, W. Edward.....Detroit
Woodworth, William P.....Detroit
Wreggit, W. R.....M
Wruble, Joseph .....Detroit
Wygant, Thelma .....Detroit

Yesayian, H. G.....Detroit
Yonkman, Frederick F.....Detroit
York, Frederick P.....M
Yott, William J.....M
Young, Donald Andrew.....M
Young, Donald C. .....M
Young, James P.....Detroit
Young, Lloyd B.....M
Young, Viola M.....Detroit
Zbudowski, A. S.....M
Zbudowski, Myron R.....M
Zemens, Joseph L...Grosse Pte. Woods
Zimmerman, Israel J.....M
Zimmerman, R. L.....Detroit
Zinn, George H.....Detroit
Zinterhofer, John .....Detroit
Zinterhofer, Louis .....Detroit
Zlatkin, Louis .....Detroit
Zolliker, Carl R.....Detroit
Zuelzer, Wolfgang .....Detroit
Zukowski. Sigmund A.....M

Wexford-Missaukee Counties

Albi, R. W.....M
Brooks, G. W.....Tustin
Carrow, J. F.....Marion
Daugherty, R. .....M
Gruber, John F.....Cadillac
Hoagland, F. L.....M
Holm, Augustus .....Leroy
Holm, Benton .....Cadillac
Hoverter, J. W.....Evart
Inman, J. C.....M
Lommen, Ralph .....Manton
McCall, James H.....Lake City
McManus, Edwin .....Mesick
Masselink, H. J.....McBain
Merritt, C. E.....Manton
Mills, Robert E.....Boon
Moore, G. P.....M
Moore, Sair C.....Cadillac
Murphy, Michael R.....Cadillac
Purdy, Calvin S.....Buckley
Seltzer, Sol Norris.....Marion
Showalter, Lawrence E.....M
Smith, Wallace .....Cadillac
Tornberg, Gordon C.....Cadillac
Wood, George H.....Reed City

BARBITURIC CONTROL ACT

The 1943 Michigan Legislature passed Act 204 to regulate the sale and possession of barbituric acid and any of its derivatives, chloral hydrate, or paraldehyde.

Section 1-b reads:

"Licensed physicians, dentists and veterinarians may dispense or prescribe barbituric acid and any of its derivatives, chloral hydrate or paraldehyde: Provided, That a record of all such dispensations, except administration to a patient upon whom such physician, dentist or veterinarian shall personally attend, shall be kept showing the date when issued and bearing the name and address of the patient for whom, or the owner of the animal for which the drug is dispensed, which record shall be open to inspection by any officer of any organized police force of this state or any prosecuting attorney or his investigators."

Act 204, P.A. of 1943 (which becomes effective July 30, 1943) will be published in full in the June MSMS Journal.

REVISION OF MICHIGAN WORKMEN'S COMPENSATION ACT

Do you know about the recent changes in the Workmen's Compensation Act as amended by the 1943 Michigan Legislature, and how these changes may affect you?

1. The Act provides for increased liability on the part of the employer for medical care. The period has been increased from ninety days to six months with an additional six months possible at the discretion of the Commission.

2. The Act provides compensation for all occupational diseases (blanket coverage) in contrast to the thirty-one occupational diseases scheduled in the old law.

3. The Act provides for waivers for silicosis and other dust diseases under special circumstances. This clause practically makes it mandatory for each industry to adopt a medical program for self-protection. It now only compels management to examine all new employes but also those now employed, since industry becomes liable for all dust diseases of the lung not formerly covered by the old law. Prior to the enactment of the 1943 amendment, silicosis was compensable only in the mining industry. Similar cases now existing in other industries become compensable and if not discovered by medical examination and a waiver obtained, the company becomes liable.

Written request for such waiver must be filed with the Michigan Department of Labor and Industry on or before 120 days from July 30, 1943—the effective date of the new law.

If a worker is not examined the company employs him "as is" and becomes liable for compensation.

Further information relative to this law (Act 245, P.A. 1943) may be obtained by writing the Industrial Health Committee, Michigan State Medical Society, 2020 Olds Tower, Lansing.

YOU AND YOUR BUSINESS

PROGRAM OF MATERNITY AND INFANT CARE FOR WIVES AND INFANTS OF ENLISTED MEN

The First Deficiency Appropriation Act of 1943, approved March 18, makes available $1,200,000 for the period ending June 30, 1943, for grants to States to provide medical, nursing, and hospital maternity and infant care for wives and infants of enlisted men in the armed forces of the fourth, fifth, sixth and seventh grades. Allotments would be made by the Secretary of Labor based on plans developed and administered by state health agencies and approved by the Chief of the Children's Bureau. Those benefited would be the wives of privates, privates first-class, corporals, and ordinary sergeants—and comparable grades in the Navy, Marine Corps, and Coast Guard.

Additional funds for the same purpose, not in excess of $6,000,000, would be authorized by a Congressional bill (H.R. 2041) pending in the House Committee on Labor. This specifically states that the facilities shall be provided by or through official State or local health agencies; it also provides for coöperation with the medical, nursing and welfare groups and organizations.

Plans for administration of the program are being considered by the MSMS Child Welfare Committee and the Maternal Health Committee, at the invitation of the Michigan Department of Health. The development of a workable plan, to insure the best type of medical service for the recipients of this bounty and to preserve the physician-patient relationship, will be announced by The Council, after it has studied the recommendations of the two State Society committees now working on the proposed program.

* * *

NO RECORD REQUIRED IN "ADMINISTRATION" OF NARCOTICS

Are practitioners of medicine required to keep a record of narcotics dispensed to persons upon whom they are in personal attendance, in the course of their professional practice?

The answer to this question, as interpreted by the U. S. Bureau of Narcotics, is as follows: "If a physician dispenses directly to a patient a dose of narcotic drug at the patient's bedside or in the physician's office, such administration of the narcotics is in the course of personal attendance, and, assuming, of course, that the administration is for a bona fide medical purpose, no record is required to be kept of the dispensing of this dose of narcotic drug. Should the physician leave a number of narcotic tablets at the patient's home or deliver to the patient in the doctor's office additional tablets for subsequent administration by a nurse or relative of the patient, in accordance with directions left by the physician, such as might be done in the case of a person suffering from malignant cancer, the Bureau is of the opinion that the physician is required to keep a record of the narcotic tablets thus left for subsequent administration."

This interpretation was verified by the U. S. Supreme Court in the case of Peter Young vs. United States of America, decided February 2, 1942.

* * *

COMMUNICABLE DISEASES EXCLUDED FROM CRIPPLED-AFFLICTED CHILDREN ACTS

"Are indigent children suffering with pneumococcic pneumonia eligible for State aid under the Afflicted Children's Act?"

The answer to this inquiry received from a member is "No." The reason is that such a pneumonia is considered a communicable disease and the Afflicted Child Act, in Section 9, states: "Any child who shall be diagnosed after admission as a crippled child as defined by the crippled children's act, or as suffering at admission only from acute pulmonary tuberculosis, or only from any other communicable disease, or only from an incurable mental illness or defect shall be retained in the hospital under this act only for such period as may be necessary to discharge him to his home or to the jurisdiction of some other state act for the care of afflicted children. Appropriate rules and regulations may be adopted to effectuate the transfer of patients pursuant to this section."

The expenses of all such cases are charged back either to the county or to some other state agency. The same applies to crippled children by rule of the Crippled Children Commission.

* * *

MICHIGAN'S INDUSTRIAL MEDICAL-SURGICAL CONFERENCE A SUCCESS

Four hundred five (405) was the total registration at the Postgraduate Industrial Medical and Surgical Conference of April 8, held in Detroit and sponsored by the Industrial Health Committee of the Michigan State Medical Society. The audience included doctors of medicine, nurses, hygienists and representatives of labor and industry. The program was stellar in quality featuring such eminent lecturers in the industrial medical field as J. G. Townsend, M.D., Bethesda, Md.; Louis Schwartz, M.D., Bethesda, Md.; C. M. Peterson, M.D., Chicago; R. D. McClure, M.D., Detroit; Max Burnnell, M.D., Flint; Frank F. Tallman, M.D., Lansing; J. J. Bloomfield, Bethesda, Md.; Andrew T. Court, Detroit; E. P. Chester, Hartford, Conn.; L. J. Carey, Detroit; John W. Gibson, Lansing; and John L. Lovett, Detroit.

The five round-table discussions, held immediately after the "standing-room-only" luncheon, had capacity attendance. The leaders of these question-and-answer periods were: H. H. Riecker, M.D., Ann Arbor; Louis

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AMINOPHYLLINE

(Theophylline with Ethylenediamine)



An Effective Diuretic

Aminophylline is a vasodilator of coronary vessels which has often proved useful for relieving the cardiac pain due to coronary sclerosis. Its action is essentially the same as theophylline and theophylline with sodium acetate, over which it has the advantage of greater solubility.

Recently, the therapeutic scope of Aminophylline has been broadened considerably. It has been shown to have a favorable influence upon respiratory dysfunctions, such as Asthma, Paroxysmal Dyspnea and Cheyne-Stokes Respiration.

HOW SUPPLIED

AMPULES—In 2 cc. ampules (far intramusculor use) containing 7½ gr. (0.48 Gm.), in baxes af 12, 25 and 100.
In 10 cc. ampules (for intravenous use) contoining 3¾ gr. (0.24 Gm.), in baxes af 6, 25 ond 100.
In 20 cc. ampules (far introvenous use) contoining 7½ gr. (0.48 Gm.), in baxes af 6, 25 and 100.
TABLETS—In the accepted stondord tablet dasage of 1½ gr. (0.1 Gm.) and 3 gr. (0.2 Gm.), 100 ond 1,000 to the bottle.

Write for catalog and prices

Cheplin's ampules and ather bialagicol products are built up ta an "Accepted" standard — nat down to o low price — THE HIGHEST OF QUALITY AND PURITY, YET ECONOMICAL IN PRICE.

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QUALITY PURITY INTEGRITY
QUALITY PURITY INTEGRITY
PHARMACEUTICALS and BIOLOGICALS

CHEPLIN BIOLOGICAL LABORATORIES, INC.
SYRACUSE, NEW YORK

KARO Red Label and Blue Label are equally effective in MILK MODIFICATION

The chemical compositions and caloric values of these two types of KARO are practically identical.

Therefore the slight difference in flavor (hardly noticeable in the milk mixture) in no way affects the value of KARO as a milk modifier.

Either type may be prescribed for prematures, newborns and infants.



How much KARO for Infant Formulas?

The amount of KARO prescribed is 6 to 8% of the total quantity of milk used in the formula—one ounce of KARO in the newborn's formula is gradually increased to two ounces at six months.

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Schwartz, M.D., Bethesda, Md.; B. J. Hein, M.D., Toledo; Parker Heath, M.D., Detroit; and Carl Badgley, M.D., Ann Arbor. Participants in the conferences were: Frank N. Wilson, M.D., Ann Arbor; H. H. Gay, M.D., Midland; Harthur L. Keim, M.D., Marion Jocz, M.D., George Van Rhee, M.D., Earl G. Kreig, M.D., Donald W. Hedrick, M.D., W. T. Krebs, M.D., Jacob Manning, M.D., A. H. Whittaker, M.D., Joseph G. Molner, M.D., all of Detroit; S. W. Donaldson, M.D., Ann Arbor; and Mr. James L. Hill, member of Department of Labor and Industry, Lansing.

At the banquet, Mr. Charles F. Kettering of General Motors, Detroit, presented a very interesting and witty address which was extremely thought-provoking to the large number of medical men in attendance.

The meeting was attended by physicians from many parts of the country, including Regina, Sask., Canada; South Gate, California; Bristol, Conn.; Meridian, Conn.; Washington, D. C.; Chicago, Ill.; Melrose Park, Ill.; Anderson, Indiana; Indianapolis, Ind.; Kokomo, Ind.; Muncie, Ind.; Baltimore, Maryland; Crookston, Minnesota; Kansas City, Mo.; Buffalo, N. Y.; Lockport, N. Y.; New York City, N. Y.; North Tarrytown, N. Y.; Rochester, N. Y.; Saranac, N. Y.; Syracuse, N. Y.; Glenridge, N. J.; Harrison, N. J.; Linden, N. J.; Newark, N. J.; Rahway, N. J.; Trenton, N. J.; Cleveland, Ohio; Dayton, Ohio; Lima, Ohio; Norwood, Ohio; Toledo, Ohio; Vandalia, Ohio; Warren, Ohio; Oshawa, Ont.; Walkerville, Ont.; Windsor, Ont.; Philadelphia, Pa.; San Antonio, Texas.

* * *

TEMPORARY EXPEDIENTS

Seductive arguments are put forth favoring the lowering of educational standards in order to hasten the graduation of a larger number of medical students. Sympathies of legislators and governmental officials are played upon, to induce them to relax the restrictions on the practice of medicine, and to permit practitioners whose qualifications are questionable or unknown to practice under a "temporary license."

A wise man once said that there is nothing more permanent than a temporary expedient. Men are prone to follow the line of least resistance and to permit the temporary expedient to become permanent policy rather than to fight to abolish it. Reducing the quality of service, lowering standards of education, and relaxing laws governing qualifications and licensure of practitioners would be simply playing into the hands of charlatans and incompetents and worse, and cannot be justified on grounds of temporary necessity or expediency.

Temporary expedients may sometimes be necessary to meet present emergencies, but let us not forget that such expedients should be temporary; let us not be beguiled into believing that a temporary change in direction should take the place of our permanent, long-range course. This applies not only to the professions. Every citizen of this Republic should recognize this principle, for the problems of the professions are essentially the problems of America. We all belong to one Commonwealth which has prospered and grown strong under the "American way of life." It is a prime

duty of us at home to see to it that temporary expedients are abandoned when the emergency is past and that the soldiers come back to the kind of America for which they are fighting.—STEPHEN H. BAXTER, President, Minnesota State Medical Association, *Minnesota Medicine,* March, 1943.

NATIONAL HEALTH COUNCIL

A National Health Advisory Council was organized in Washington, Februrary 5, 1943, to project and carry out a broad program looking to health conservation as one of the most important factors in winning the war.

The Council was created by the Chamber of Commerce of the United States to consider national health problems in relation to the war program.

The meeting was opened with a statement by National Chamber President Eric A. Johnston, which said:

Disease and physical disability in war production constitute one of the most serious threats to speedy victory. Medical authorities estimate that a well-thought out program, vigorously carried out, could add the full time of as many as one million workers to the war program. We must disarm and defeat disease on the home front if we are to make early victory possible. Even partial conquest in that direction would add greatly to the nation's manpower resources, now presenting one of the war program's most difficult problems.

"And, aside from the direct benefits accruing to the war effort from health conservation, we must consider the staggering cost of disease. Together with physical disability, it is taxing the American people $10,000,000,000 a year. This tax everyone pays and no one gets. It is a 5 to 10 per cent drag on war operations."

General chairman of the Council is Dr. James S. McLester, professor of medicine at the University of Alabama, who outlined the contemplated nationwide program. He said:

"The plan is for a broad educational effort designed to raise the nation's health levels. Once established, it is earnestly hoped these levels can be maintained after the war is won, as a means of continuing improvement of the national welfare.

"It is intended to promote both within and out of industry personal health, safety, nutrition and physical conditioning, with particular emphasis on war emergency needs and conditions. The program will be made available widely to industrial organizations, chambers of commerce and communities. In any community it can be applied to reduce work absence, raise the morale and increase the physical effectiveness of workers and to assist their families in problems of health, diet, illness and nursing.

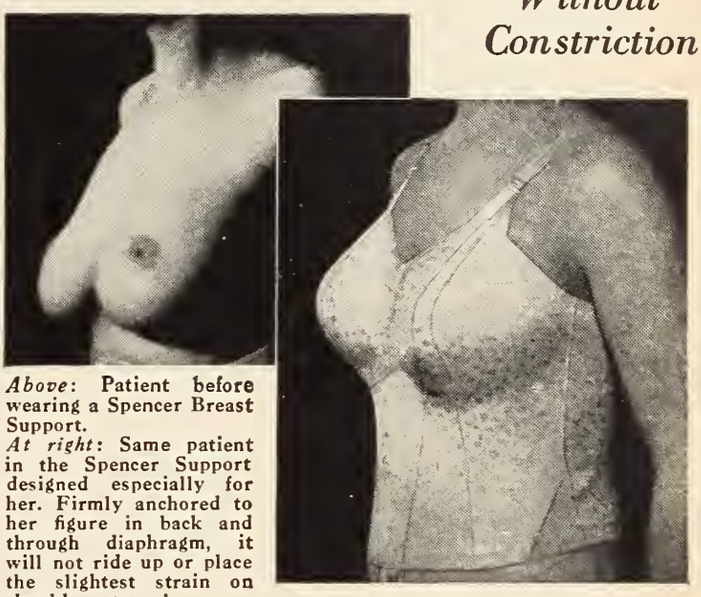
"War Production officials are appealing to War Production Drive Committees, of which there are nearly 2,000 in war plants, to keep the American workman healthy and fit, so as to gain man hours in production. Only healthy workers can supply the needed drive to keep our armed forces supplied with the implements of war.

"Few investments can yield the returns that will come from an aggressive effort to better the national health."

Members of the Council from Michigan are Dr. Henry F. Vaughan, University of Michigan, represented by Dr. Nathan Sinai, and Dr. John J. Prendergast,

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Medical Director and 1st Vice President, Chrysler Corporation, Detroit.

Reports were made by three committees of the council. The committees and their chairmen are Community Health Committee, Dr. Smillie; Industrial Health Committee, Dr. Bristol; and Individual Health Committee, Dr. James E. Paullin, Professor of Medicine, Emory University, Atlanta, Georgia.

At a luncheon meeting Dr. Thomas Parran, surgeon general of the United States, talked on the health state of the nation.

ANNIVERSARY DINNER

The East Side Physicians' Association, Detroit, held its 30th Anniversary on April 30 at an "Old Timer's Dinner" in the Wayne County Medical Society Headquarters. Howard W. Peirce, M.D., was chairman, and Louis J. Hirschman, M. D., acted as toastmaster. Talks were given by Hugh Harrison, M.D.; R. L. Clark, M.D.; William Hipp, M.D.; L. O. Geib, M.D.; Henry A. Luce, M.D.; Harry L. Clark, M.D.; A. H. Whittaker, M.D.; A. S. Brunk, M.D.; B. U. Estabrook, M.D., and William J. Burns. Interesting and amusing tales concerning the early practice of medicine in Detroit were recounted. Hugh Harrison, who started practicing in June, 1896, recalled how he had the only telephone in the neighborhood: "Neighbors occasionally requested the use of my phone, and then called up their own doctor!" Many physicians recalled riding bicycles in the early days of their practices.

Among those present were: W. D. Barrett, M.D.; Alex. W. Blain, M.D.; J. R. Boland, M.D.; A. S. Brunk, M.D.; Clifford F. Brunk, M.D.; Cornelius Carey, M.D.; Harry L. Clark, M.D.; H. B. Garner, M.D.; L. O. Geib, M.D.; A. A. Gronow, M.D.; Joshua Hanser, M.D.; Hugh Harrison, M.D.; Louis J. Hirschman, M.D.; William Hipp, M.D.; Arthur J. Jones, M.D.; R. G. James, M.D.; Charles W. Knaggs, M.D.; Henry A. Luce, M.D..; Robert C. Moehlig, M.D.; Howard W. Peirce, M.D.; H. A. Reye, M.D.; E. L. Robinson, M.D.; Arthur E. Schiller, M.D.; H. L. Ulbrich, M.D.; V. L. VanDuzen, M.D., of Grand Rapids; Milton D. Vokes, M.D., and A. H. Whittaker, M.D.

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Communication

A REPLY TO THE EDITORIAL ON REFUGEE PHYSICIANS

Dear Doctor:

Your objections to our colleagues are as follows: (1) They are unqualified; (2) will lower medical standards; (3) will usurp the places of the "boys" at the front.

These charges are unfounded. It is ridiculous for any thinking person to conclude that a total of 6,000 could cause such manifold dislocations in a population of over 130,000,000 peoples.

The fact remains that there may be some United States graduates, now practicing, who could not meet modern standards, or examinations and so with the refugee group also. Some, however, have had international reputations before the Hitler era.

It is a sad commentary on our vaunted hospitality, and American spirit of fair play, that we should treat this group with such *fear, indifference* and even *hatred.* Wouldn't it have been to our honor and pride to have offered these colleagues a *Constructive Program,* based on good will?

The founding fathers of our dear old U. S. A. were also refugees. They fostered opportunity and justice for all. The editor's plan to regiment this group by government employment may be interpreted by the government as an invitation to extend this plan to others, too.

A constructive program (by Refugee Committees) as refresher courses, preceptorships, residencies, et cetera, for periods of six months to a year or longer, should suffice to enable the large majority of this group to do effective medical work and this should lead to licensing.

In many cities, towns, and hamlets, the osteopath, the chiropractor and the cultist, have taken over completely when our members have left for U. S. Service. This group under NO discipline of organized medicine will be a serious threat to the returning men. Another example of the—"too little, and too late."

There is a shortage of medical man power. Let us harken to the wise words of the master ship builder, Henry Kaiser, and take unselfish progressive steps to meet a changing situation. The refugee M. D. offers us an opportunity. Are we following the "Golden Rule" in this problem?

S. E. Barnett, M.D.

25 Parsons Street,
Detroit, Michigan.

The Michigan Crippled Children's Commission, as recently reorganized by Governor Harry F. Kelly, is composed of Emmet Richards, Alpena; Maxwell Reynolds, Marquette; George R. Cooke, Grosse Pointe Farms; Roger V. Walker, M.D., Detroit, and Nate S. Shapero, Detroit.



Woman's Auxiliary

OUR ANNUAL MEETING PLANS

Although the Annual Meeting is September 21-22 in Detroit, it is only a stone's throw away, and we should be organizing our plans. Every effort is being made to develop a streamlined convention in order to plan the most for the least amount of your time. Have you appointed your delegates, and made your reservation with the hotel? While we think it is one of the nicest places for the meeting, it is equipped to accommodate just so many. Be sure to make your reservations early.



Many changes have been made in our officers and chairmen this year due to the war. Many of our members are leaving the state to accompany their husbands to army camps. Most recent among our losses is our press chairman, Mrs. Hira Branch, who has gone to Texas. We regret to lose her but we must carry on. Send your press notices to the secretary, Mrs. Wm. B. Hubbard, 1205 Maxine St., Flint, or to your president, so we may keep the press scrap book up to date. Mrs. Branch informed me that clippings were not coming in very well. We want you to be proud of your Auxiliary when the press scrapbook is displayed at the convention.

During May, speakers are available through your own Speakers Bureau of the Civilian Defense on "War and Tuberculosis." We urge you to present one of these speakers at your meeting. Also keep in mind the contest on Tuberculosis that the Executive Board voted to sponsor again next year.

Mrs. Roger V. Walker, 1507 Iroquois Ave., Detroit, Michigan, would like all By-laws' revisions sent to her as soon as possible so as to be ready for the convention.

Remember the convention and make your reservation early.

Sincerely yours,
MRS. G. L. WILLOUGHBY, *President*

* * *

GENESEE COUNTY

The Woman's Auxiliary of the Genesee County Medical Society held its annual meeting Tuesday, March 23, at the Durant Hotel.

Mrs. Arthur Kretchmar was elected president; Mrs. Don Wright, president-elect; Mrs. Herbert White, vice president; Mrs. Eugene Smith, secretary; Mrs. Clayton Stroup, treasurer.

Mrs. Alvin Thompson, the retiring president, was presented with a corsage and a gift as appreciation of completing the term of office of Mrs. Stephen Gelenger, who resigned to accompany her husband to an army hospital.

A committee was appointed to work with the Office of Civilian Defense, in organizing Neighborhood War Clubs in the city. A committee was also appointed to meet with the Doctors to make plans, furnish emergency kits for soldiers, and gifts for our Doctors in the service.

The committee in charge of arrangements were: Mrs. Don Wright, Mrs. R. W. MacGregor, and Mrs. G. L. Willoughby.

* * *

KENT COUNTY

The Woman's Auxiliary to the Kent County Medical Society will have its annual Spring Tea, Wednesday, April 14, at two o'clock, at the home of Mrs. Carl Snapp, 980 Plymouth Road S.E.

* * *

INGHAM COUNTY

At the regular business meeting of the Woman's Auxiliary to the Ingham County Medical Society, at which Mrs. Milton Shaw, president, presided, Mrs. Frank B. Heckert, secretary, reported on work done by auxiliary members. This included eighty-four baby blankets, 132 towels made and sixteen hours spent folding bandages for the St. Lawrence hospital, 720 pads made and 530 sponges counted for the Edward W. Sparrow hospital. Fifty-two hours of work were given each institution during January, Mrs. Heckert said.

Mrs. Horace L. French, welfare chairman, reported that 540 stitched dressings were made on emergency call, in coöperation with the Red Cross surgical dressing unit at Plymouth Congregational Church.

The auxiliary voted to contribute a substantial sum of money to the Ingham County War fund, and in response to a request from the civilian defense office, members voted to assist in the rationing schedule registering within the next few weeks, and to help with clerical work for the approved agencies of the county defense council when the need arises.

* * *

JACKSON COUNTY

The Woman's Auxiliary to the Jackson County Medical Society reports that their outstanding meeting was held recently in the Hotel Hayes.

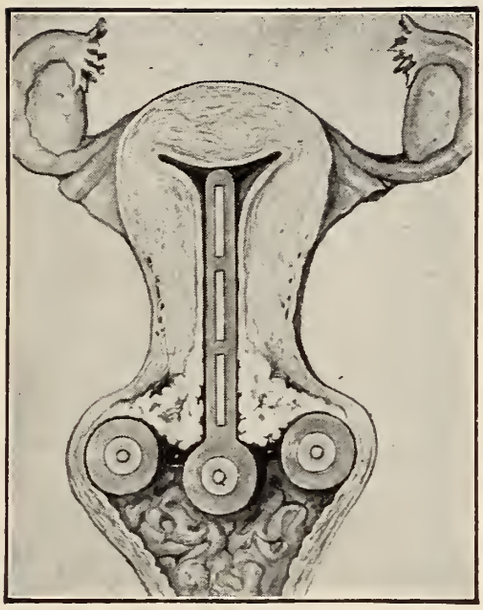
Mrs. E. O. Leahy, president, conducted the business session, and welcomed the members.

Mrs. Thomas Hackett, program chairman, presented members of the auxiliary who created a picture of the war activities as follows:

Mrs. R. H. Alter, chairman of Junior Red Cross; Mrs. G. R. Bullen, member of Red Cross First Aid committee; Mrs. Charles Dengler, chairman of Red Cross Home Nursing; Mrs. Don Kudner, Red Cross Motor Corps, and chairman of Red Cross Blood Donors; Mrs. W. E. McGarvey and Mrs. M. N. Stewart of Emergency Shelter nurses and OCD Blood Bank;

(Continued on Page 412)

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Physical Therapy is a leading factor in reducing "time off" in a large variety of conditions.

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COUNTY AND PERSONAL ACTIVITIES

100 PER CENT CLUB FOR 1943

Barry County—H. S. Wedel, M.D. Secretary
Branch County—James Bailey, M.D., Secretary
Cass County—K. C. Pierce, M.D., Secretary
Chippewa-Mackinac—David Littlejohn, M.D., Secy.
Clinton County—T. Y. Ho, M.D., Secretary
Dickinson-Iron—E. B. Anderson, M.D., Secy.
Gogebic County—F. L. S. Reynolds, M.D., Secy.
Huron County—J. Bates Henderson, M.D., Secretary
Jackson County—H. W. Porter, M.D., Secy.
Lapeer County—H. M. Best, M.D., Secretary
Livingston County—Ray Duffy, M.D., Secretary
Luce County—Sidney Franklin, M.D., Secretary
Manistee County—C. L. Grant, M.D., Secretary
Mecosta-Osceola-Lake—John A. White, M.D., Secretary
Menominee County—Wm. S. Jones, M.D., Secy.
Midland County—H. H. Gay, M.D., Secretary
Muskegon County—Helen Barnard, M.D., Secy.
Newaygo County—W. H. Barnum, M.D., Secy.
Oceana County—W. Heard, M.D., Secretary
Ontonagon County—W. F. Strong, M.D., Secy.
Sanilac County—E. W. Blanchard, M.D., Secy.
Shiawassee County—I. W. Greene, M.D., Secy.
St. Joseph County—R. J. Fortner, M.D., Secy.
Wexford-Missaukee—B. A. Holm, M.D., Secy.

The above county medical societies have certified 1943 dues for every member of their respective societies, to be the first 100 per cent paid-up counties for this year. Michigan State Medical Society dues for 1943 are $12.00.

A membership record was established in 1942 when the total number of Michigan State Medical Society members reached an all-time high of 4,714.

We in the United States have been at war for sixteen months. The first twenty-four months of war we will have borrowed for war $122 billion; now face a gross debt figure topping $210 billion by June 30, 1944.—Congressman Fred L. Crawford, 8th District, Michigan.

* * *

Wayne County Health Department—The Board of Supervisors of Wayne County have voted to establish a full-time County Health Department, effective May 1. This is the sixty-ninth Michigan county to provide full-time public health service.

* * *

"Electrocardiography" will be the subject of a two weeks' intensive postgraduate course at Michael Reese Hospital, Chicago, August 16 to August 28. For further information write Michael Reese Hospital, 29th and Ellis Avenue, Chicago.

Lieutenant Harry H. Kay, M.C., Station Hospital, Keesler Field, Biloxi, Mississippi: "I wish I could tell you how much I appreciate receiving the MSMS JOURNAL from you every month. It is a grand feeling to know you are remembered though you are so far away and to feel that we still belong."

* * *

War-Busy Michigan led all other states both in the number of participating communities and in awards in the National Health Honor Roll Contest, 1942. The announcement places the City of Detroit and the Saginaw County, Sanilac County and Van Buren County Health Departments on the Honor Roll.

* * *

Two counties of Michigan—Chippewa and Mackinac counties—are a part of the first military command of its kind in the United States under provisions similar to those in the Panama Canal Zone. These two counties were designated as a military area effective March 22, 1943.

* * *

J. D. Laux has resigned from Michigan Medical Service, Detroit, and has accepted a position as Senior Economist with the War Manpower Board, Washington, D. C. The Board of Directors of Michigan Medical Service, at its meeting March 31, placed a vote of thanks and appreciation to Mr. Laux for his valued service to MMS for almost four years, since the corporation was established in 1939.

* * *

C. J. Smyth, M.D., M. B. Finkelstein, M.D., S. E. Gould, M.D., of Eloise, Michigan; T. M. Koppa, M.D., and F. S. Leeder, M.D., Lansing, are authors of an original article entitled "Acute Bacillary Dysentery (Flexner)," which appeared in the JAMA, April 24.

F. W. Hartman, M.D., Broch Brush, M.D., and K. W. Warren, M.D., of Detroit, are co-authors of "Pectin Solution in Shock," which appears in the same issue.

* * *

Captain Paul H. Jordan, M.C., Stark General Hospital, Charleston, South Carolina: "Just a word to express my appreciation for the courtesy of the Society in retaining our membership in force and forwarding the MSMS JOURNAL to those of us who are in the armed forces. I find it invaluable as an aid to keeping in touch with what is going on in the medical field there."

* * *

The Michigan Pathological Society held its regular bi-monthly meeting on April 10, at Herman Kiefer Hospital, Detroit. Forty-one members and guests were in attendance. A seminar on "Diseases of the Lymphatic System" was presented. Case presentations were given by: O. W. Lohr, M.D., Saginaw; S. E. Gould, M.D., Eloise; Lt. W. L. Lehman, M.C., USNR, New Orleans, La.; H. E. Cope, M.D., Lansing; J. G. Christopher, M.D., and F. W. Hartman, M.D., Detroit; S. M.

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to the profession in the Armed Forces at a
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Graduate School of Medicine

(In Affiliation with Cook County Hospital)

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ANNOUNCES CONTINUOUS COURSES

SURGERY—Two Weeks' Intensive Course in Surgical Technique starting May 3, 17, 31, June 14, and 28, and every two weeks throughout the year.

MEDICINE—Two Weeks' Intensive Course starting June 7. One Month's Course in Electrocardiography and Heart Disease starting the first of every month, except August. Two Weeks' Course in Electrocardiography starting August 2.

FRACTURES & TRAUMATIC SURGERY—Two Weeks' Intensive Course starting June 14 and October 18.

GYNECOLOGY—Two Weeks' Intensive Course starting June 28. One Month's Personal Course starting August 2. Clinical and Diagnostic Courses.

OBSTETRICS—Two Weeks' Intensive Course starting October 4.

OPHTHALMOLOGY—Two Weeks' Intensive Course starting September 13. Course in Refraction Methods October 4.

OTOLARYNGOLOGY—Two Weeks' Intensive Course starting September 27.

ROENTGENOLOGY—Courses in X-ray Interpretation, Fluoroscopy, Deep X-ray Therapy every week.

UROLOGY—Two Weeks' Course and One Month's Course available every two weeks.

CYSTOSCOPY—Ten-day Practical Course every two weeks.

General, Intensive and Special Courses in All Branches of Medicine, Surgery and the Specialties.

TEACHING FACULTY — ATTENDING STAFF OF COOK COUNTY HOSPITAL

Address: Registrar, 427 S. Honore St., Chicago, Ill.

Asselstine, M.D., Windsor, Ontario; D. H. Kaump, M.D., Detroit; H. R. Prentice, M.D., Kalamazoo; Gabriel Steiner, M.D., and L. Berman, M.D., Detroit.

The next meeting will be held at the Bronson Methodist Hospital, Kalamazoo, on June 12, 1943. The subject will be "Infections produced by parasites, including fungi and higher bacteria."

* * *

Three new Lieutenant Colonels have been created from among the military members of the Michigan State Medical Society: Lt. Colonel H. S. Collisi, M.C., of Billings General Hospital, Fort Benjamin Harrison, Indiana; Lt. Colonel Marsh W. Poole, M.C., Bushnell General Hospital, Brigham City, Utah; Lt. Colonel Walter M. Bartlett, Executive Officer, 315 Station Hospital, Camp Bowie, Texas. Dr. Collisi is a Grand Rapids surgeon; Dr. Poole comes from Detroit; and Dr. Bartlett is from Benton Harbor.

Congratulations Lt. Colonel Bartlett, Collisi, and Poole!

* * *

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C. V. Mosby Company, St. Louis, Missouri
The National Livestock and Meat Board, Chicago, Illinois
Parke, Davis & Company, Detroit, Michigan
Pelton & Crane Company, Detroit, Michigan
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Petrogalar Laboratories, Chicago, Illinois
Philip Morris & Co., Ltd., New York, N. Y.
Philosophical Library, New York, N. Y.
Picker X-Ray Corporation, New York, N. Y.
Proctor & Gamble, Cincinnati, Ohio

The above ten firms were among exhibitors at the 1942 MSMS annual meeting in Grand Rapids and helped make possible for your enjoyment one of the outstanding state medical meetings in the country. Remember your friends when you have need of equipment, medical supplies, appliances or service.

* * *

Cost of an American Beveridge Plan. The recent cradle-to-grave security program, as transmitted to Congress from the National Resources Planning Board has been translated into dollar costs by Gerhard Hirschfeld, Research Director of the Insurance Economics Society of America. The plan when in full swing, would amount to $15,097,000,000 per annum:

SOCIAL INSURANCE BENEFITS:	
Retirement pensions	$ 3,700,000,000
Widow's and guardian benefits	590,000,000
Unemployment benefits	2,025,000,000
Disability benefits	1,365,000,000
Maternity grants and benefits	140,000,000
Marriage grants	20,000,000
Funeral grants	80,000,000
Cost of administration (5%)	400,000,000
Total	$ 8,320,000,000
NATIONAL ASSISTANCE:	
Total	940,000,000
CHILDREN'S ALLOWANCES:	
For children	2,400,000,000
Cost of administration (3%)	72,000,000
Total	$ 2,472,000,000
HEALTH SERVICES:	
Total	3,365,000,000
Grand Total	$15,097,000,000

MSMS ANNUAL MEETING
Detroit—September 22, 23, 24

The 1943 Postgraduate Conference on War Medicine—the 78th annual meeting of the Michigan State Medical Society—will be held at the Statler Hotel, Detroit, in September. The scientific program will be as high-class as in the past, including such medical stars as:

Medicine—Walter C. Alvarez, M.D., Rochester, Minn.
Pathology—Paul R. Cannon, M.D., Chicago
Radiology—E. L. Jenkinson, M.D., Chicago
Pediatrics—Sister Elizabeth Kenny, Minneapolis, Minn.
Ophthalmology—Peter C. Kronfeld, M.D., Chicago
Surgery—Frank H. Lahey, M.D., Boston
Otolaryngology—Harold I. Lillie, M.D., Rochester, Minn.
Pediatrics—Irvine McQuarrie, M.D., Minneapolis, Minn.
Gynecology—Robert D. Mussey, M.D., Rochester, Minn.
General Practice—James E. Paullin, M.D., Atlanta, Ga.
Maternal Health—Edward A. Schumann, M.D., Philadelphia
Surgery—Kellogg Speed, M.D., Chicago
Psychiatry—John C. Whitehorn, M.D., Baltimore, Md.

In addition, other eminent speakers have been invited to address the General Assembly on subjects dealing with Dermatology, Obstetrics, Anesthesiology, and other phases of medicine, surgery, and pediatrics.

This concentrated three-day postgraduate course presents an opportunity of the greatest worth to every practitioner of medicine in Michigan.

"Will You Cash a Check?"

Check up on the checks you cash.

That's the advice of the U. S. Secret Service to Doctors of Medicine who cash checks and to the people of America who have checks to cash, for 1943 will see more government and industrial payroll and commercial checks in use than in any year in U. S. history.

If you are cashing a patient's check, make sure you know how to find the endorser if the check "bounces." Should a bank return the check and you cannot find the person who passed it, it will be your loss.

The Secret Service, which authored the successful "Know Your Money" campaign against counterfeit currency, has extended its educational program to cover checks. "Know Your Endorsers" is the advice it gives to professional people, merchants, and others who are in a position to cash the public's checks.

Resolution re Hygeia, the Health Magazine.—The following resolution was unanimously adopted by the MSMS House of Delegates at its Grand Rapids meeting of September 21-22, 1942:

WHEREAS, the War Production Board advises that

HAY FEVER
EXTRAORDINARY EFFECTIVE TREATMENT
for previously non-responsive patients

Designed for Practical Use by ALL Physicians in this Locality

Today's most effective treatment of Hay Fever is based upon testing with the correct selection of *local* pollens and fungi. Testing technic is simple. It takes but a few minutes to run through the Barry selection for your locality. A Barry Testing Kit may be obtained for your patient containing the specific irritants determined by accurate botanical studies and pollen counts.

TREATMENT: Skin test *reactions of the local pollens and fungi* and a brief history are all that are needed to institute a suitable treatment series with Barry products. This *specialized* service permits incorporation of *ALL* the proper irritants in the proportions that will give most satisfactory results. Each treatment set is "TAILOR-MADE" to meet your own patients' requirements at ordinary stock set cost.

Give your patients the benefit of a scientific treatment that is patterned after allergists' most successful methods.

WRITE TODAY for your Barry Testing Kit containing 20 local pollens and fungi. Complete set 50c.

SPECIAL SERVICE BULLETINS M5 AVAILABLE

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All worth while laboratory examinations; including—

Tissue Diagnosis
The Wassermann and Kahn Tests
Blood Chemistry
Bacteriology and Clinical Pathology
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sick and injured war production workers lose 6,000,000 workdays each month, and,

WHEREAS, Donald Nelson, Chairman of the War Production Board, and Paul V. McNutt, Chairman of the War Manpower Commission, and others are urging that every state and community make it their job to take an active part in saving as many of those lost days as possible for the Production Drive and keep the nation's workers on the job and physically fit, and

WHEREAS, The National Research Council is asking the general public to focus its attention on proper food and nutrition for better health defense, and

WHEREAS, there is an urgent need for authentic health information and first aid training in home and factory and among the men in the Army camps and Naval stations, and by Red Cross workers, block captains, and civilian defense authorities, and,

WHEREAS, thousands of physicians have already left civilian practice to enter the armed forces and by the end of this year more than 25 per cent of the active medical profession will be out of general practice, and,

WHEREAS, the increased public demand for health information cannot be met alone by the heavily worked physicians who remain in private practice, and,

WHEREAS, it remains the responsibility of the medical profession to do its utmost in disseminating to the laity health information and sound advice, and

WHEREAS, in 1921 at the Boston session of the American Medical Association, the House of Delegates authorized the publication of *Hygeia, The Health Magazine,* which was designed to give sound health information in nontechnical language, to interpret the progress in scientific and preventive medicine, and to discourage the reliance on quacks and the use of patent medicines, and,

WHEREAS, there is no other national magazine in the field of health that offers the large amount of authentic health information in lay language, and,

WHEREAS, this magazine, under careful scrutiny of the American Medical Association, maintains high professional standards of accuracy in its editorial and advertising policy,

THEREFORE, BE IT RESOLVED, that the House of Delegates of the Michigan State Medical Society, in recognition of the great public need for reliable health information and in recognition of the Service that *Hygeia, The Health Magazine,* can perform in terms of industrial, civilian and community health, hereby endorse this magazine, and to this end recommend that officers and members of the county medical societies of the Michigan State Medical Society urge wider recognition of *Hygeia* in their communities.

BE IT FURTHER RESOLVED that we offer full support and complete coöperation to the Woman's Auxiliary to the Michigan State Medical Society and its affiliated units in their efforts to disseminate health information through *Hygeia, The Health Magazine,* and to urge them to introduce *Hygeia* in war industries, Army camps, USO Centers, reception rooms of physicians and dentists, and among their patients, in homes, schools, teachers' colleges, libraries, parent-teacher organizations, private clubs and other community centers.

BE IT FURTHER RESOLVED that copies of this resolution be sent to the Editor of *Hygeia* at the headquarters of the American Medical Association in Chicago and to the secretary of each component county medical society of the Michigan State Medical Society with the request that this resolution be read at the next stated meeting and similar action taken to coöperate in this health education campaign by widening the distribution of *Hygeia, The Health Magazine.*

Say you saw it in the Journal of the Michigan State Medical Society

IN MEMORIAM

DIED IN MILITARY SERVICE

Lieutenant Ralph H. Sullivan, M.C., of Lansing, was born November 26, 1913, in Anderson, Indiana, and was graduated from the University of Michigan Medical school in 1940. He served his internship in St. Lawrence Hospital in 1941, and was its resident physician in 1942, entering the armed forces in July of that year. For three years he was connected with the 119th Field Artillery of the Michigan National Guard. Doctor Sullivan was killed while on a routine flight near Tonapah, Nevada, where he was the flight surgeon for the 362nd Fighter Squadron, stationed at the gunnery and bombing range there. He died March 26, 1943.

Guy Leartus Connor of Detroit, was born October 10, 1894 in Detroit and was graduated from Johns Hopkins Medical School in 1901. Doctor Connor was assistant clinical professor of neurology, psychiatry and preventive medicine. He was medical director of the Detroit Board of Education from 1914 to 1935. For years he was a member and Secretary of the Michigan State Board of Registration in Medicine, and was attending neurologist at the Children's Hospital, Harper Hospital, and St. Mary's Hospital. He was a Fellow of the American College of Physicians, a member of the Detroit Academy of Medicine, and the Detroit Society of Neurology and Psychiatry. Doctor Connor died in Fort Lauderdale, Florida, April 19, 1943.

* * *

John J. Corbett of Detroit was born in Syracuse, New York, in 1893, and was graduated from the Syracuse University Medical School in 1917. After serving as a captain in the Medical Corps in World War I, Doctor Corbett came to Detroit and entered practice in 1920. He was a frequent contributor to medical journals and was a Fellow of the American College of Surgeons, of the American Proctological Society, a member of the Founders Group of the American Board of Proctology, and an associate professor of proctology at Wayne University Medical School. Doctor Corbett died April 10, 1943.

* * *

Willoughby L. Godfrey of Battle Creek was born April 25, 1852 in Battle Creek, and was graduated from the University of Michigan Medical School in 1876. He began practice in Battle Creek, but after a year went to Williamson, New York, to become associated with his uncle, Lathrop Sprague,

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M.D. He later returned to Battle Creek, where he remained until 1928, when he retired. Doctor Godfrey was one of the earliest members of the Calhoun County Medical Society, serving as its president in 1917. He was elected to Honorary Membership in the Michigan State Medical Society in 1929. Doctor Godfrey died at the age of ninety years on April 7, 1943.

WOMAN'S AUXILIARY

(Continued from Page 404)

Mrs. C. Schepler, chairman of Brooklyn Red Cross program; Mrs. A. M. Schaeffer, secretary of the executive committee of the Red Cross; Mrs. J. C. Smith, of the Gray Ladies, and house committee of the Red Cross; Mrs. M. V. Susskind, teacher of bacteriology at Mercy Hospital.

Besides their Red Cross activities, the group has furnished cookies for the soldiers and assisted in packing boxes for Doctors in service.

A musical interlude was given by Miss Agnes Wardroper, pianist, accompanied by Mrs. Schaeffer, when she led the group in singing.

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THE DOCTOR'S LIBRARY

Acknowledgment of all books received will be made in this column and this will be deemed by us as a full compensation of those sending them. A selection will be made for review, as expedient.

SYNOPSIS OF DISEASES OF THE SKIN. By Richard L. Sutton, M.D., Emeritus Professor of Dermatology, University of Kansas Medical School, and Richard L. Sutton, Jr., M.D., Assistant Professor of Dermatology, University of Kansas Medical School. With 413 illustrations. St. Louis: The C. V. Mosby Company, 1942. Price $5.50.

Diseases of the skin are presented in condensed form, emphasizing the things commonly seen, and omitting the rare diseases that have only an academic interest for most practitioners. The grouping of diseases is logical, as dermatoses due to viruses and rickettsiae, bacteria, fungi, protozoa metazoa, and metabolic. Then atrophies, neuroses, pigmentations and depigmentations, malformations and new growths. The language is clear, brief, but adequate. The paper is good, the print clear, sufficiently large, and the book easily of pocket size, with a semiflexible cover.

BURNS, SHOCK, WOUND HEALING AND VASCULAR INJURIES. Prepared by the Committee on Surgery of the Division of Medical Sciences of the National Research Council. Illustrated. Philadelphia & London: W. B. Saunders Company, 1943. 260 pages, $2.50.

This is the fifth of a series of six valuable books prepared by the National Research Council, summarizing standard treatment recommended by medical men on this committee for wartime emergencies. Roy D. McClure, Conrad Lam, Henry N. Harkins and James Barrett Brown present an up to date résumé of burn thereapy and plastic surgery, outlining treatment of acute burns, old burns, and deformities resulting from burns. There is a chapter on burns in chemical war-

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fare. Alfred Blalock and his committee of six summarize modern treatment of shock and outline modern concepts of the mechanism of shock.

Allen O. Whipple has an excellent chapter on wound healing, with a summary of common civil injuries and war wounds as well. Pertinent up to date information on the treatment of vascular injuries is presented in the last chapter, prepared by John Homans and his committee of Arthur W. Allen, Daniel Elkin, Geza de Takats, and Walter G. Maddock. This manual is invaluable to the general man as well as the surgeon in present-day civil practice.

NEUROSURGERY AND THORACIC SURGERY: Military Surgical Manuals, Volume VI. Prepared and edited by the Subcommittee on Neurosurgery and Thoracic Surgery of the Committee on Surgery of the Division of Medical Sciences of the National Research Council. 310 pages with 103 illustrations. Philadelphia and London: W. B. Saunders Company, 1943. Price $2.50.

The Medical Departments of the Army and Navy have recognized the great amount of specialization of the medical profession, and the need during this war to have well trained and competent men always available when needed. That is not possible under the conditions obtaining, so on the theory that training in special practice fits a man for other specialties with certain special help, six surgical manuals have been prepared for the use of those who are on the field or available when special treatment is necessary. These manuals are not textbooks but do contain the things necessary for a trained man to give the relief that will prove the most beneficial at the time when it is the most needed. Theoretically a specialist in most any field with the aid obtainable in these books can give first class attention to the wounded; at least until they can be placed under the care of the proper specialists. This book contains the essential information for the care of war injuries of nerves and neurological systems, also the field of thoracic surgery. Deaths from chest injuries are high, being about 33 per cent on the field, 25 to 30 per cent at dressing stations and 20 to 25 per cent in transportation. It is hoped to cut these figures down by the study of procedures given in this book.

A TEXTBOOK OF CLINICAL NEUROLOGY. By Israel S. Wechsler, M.D., Clinical Professor of Neurology, Columbia University, New York; Neurologist, The Mount Sinai Hospital; Consulting Neurologist, The Montefiore and Rockland State Hospitals, New York. Fifth Edition, Revised. 840 pages with 162 illustrations. Philadelphia and London: W. B. Saunders Company, 1943. Price $7.50.

Four years have presented so much that is new in clinical neurology that a new edition is necessary. There is a preliminary chapter on interpretation of signs and symptoms, with a section of psychosomatic tests. The text then is devoted to diseases of the spinal cord, the peripheral nerves, the brain, and the neuroses. Many pictures are given showing diseased conditions or pathological specimens. The diseases described are fully presented, giving the symptoms and signs necessary to make a diagnosis, and the indications of the conditions described. The book is very complete, readable, has many references, and forty two pages of very good index. It is clinical rather than pedantic, and will prove most useful.



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CHEMOTHERAPY OF GONOCOCCIC INFECTIONS. By Russell D. Herrold, B.S., M.D., Associate Professor of Surgery (Urology), College of Medicine, University of Illinois, Chicago, Illinois. St. Louis: The C. V. Mosby Company, 1943. Price $3.00.

Dr. Herrold reviews the history of the use of the sulfonamides in the treatment of gonorrhea. The diagnosis of the disease is given in sufficient detail, then he discusses the use of prontosil without too much success, and its practical abandonment. Sulfanilamide came next with promising results, but not completely satisfactory. Studies were made with various of the sulfa drugs, and finally two seem to have been satisfactory, sulfathiazole and better, sulfadiazine. Treatment is outlined in detail, and the handling of failures. Infections of women and children have their chapters. There are 62 illustrative case reports. This is a handy manual well prepared and authorative.

ESSENTIALS OF GYNECOLOGY. By Willard R. Cooke, M.D., F.A.C.S., Professor and Head of Department of Obstetrics and Gynecology, University of Texas. 197 illustrations including 10 in color. Philadelphia: J. B. Lippincott Company, 1943. Price, $6.50.

Designed primarily for the medical student and the general practitioner, this concise, very readable textbook covers the problems of gynecological practice in expert fashion. Dr. Cooke pruned this book to the essentials and therein lies one of its main virtues as a reference work for your library. The presentation of the gynecologic patient as a personality is unique, for in his history-taking and examination Dr. Cooke stresses in particular the important aspects of the

patient's mode of life and psychology. The chapter on inflammatory disease of the female genital tract is complete and well done. Benign and malignant neoplasms are given adequate attention and accepted surgical procedures are listed in outline form. The treatment of postoperative complications is comprehensive.

FRACTURES OF THE JAWS, and Other Facial Bones. By Glenn Major, B.S., A.M., Ph.D., D.D.S., M.D., F.A.C.S. With chapters on radiographic technique by Lester M. J. Freedman, B.S., M.D., and War aspects of jaw fractures, by Arthur Dick, D.D.S., M.D., Major M.C., U.S.A. With 225 illustrations. St. Louis: The C. V. Mosby Company, 1943. Price, $7.50.

Fractures of the jaws are no different fundamentally from other fractures, and the same rules of diagnosis and care apply. These, however, are of especial interest because of the areas involved, the proximity to important structures and the distressing complications that may develop.

The surgeon and the dentist are both interested. This book was prepared with that interest foremost. There are chapters on general discussion, diagnosis, replacement of fractures, and emergency treatment of fractures of the facial bones. Anesthesia is important and gets a well-considered chapter.

Then there are three hundred pages of consideration of types and principles of treatment, problems in restoring to usefulness the badly broken mandible; special fractures of the maxilla, diabetic care, x-rays, fractures of the nose. War injuries and their care are discussed. Medico-legal aspects are not forgotten. This is the field which probably offers most opportunity for legal action. Every type and method of bone fixation and control is illustrated and described.

The illustrations are good and completely adequate. The book is a ready and practical reference.

THE SIGHT SAVER. By C. J. Gerling. New York: Harvest House, 1943. Price, $2.00.

"Most of the dread eye diseases once commonly thought to lead to blindness may now be successfully treated and halted, and often cured, if only treatment is begun early enough." This book consists of an introduction based upon the above quotation, and two hundred pages of an encyclopedia alphabetically arranged of very lucid and factual discussions of every conceivable topic from accommodation, acid in the eye, afterimages to xerophthalmia, x-rays and sight and yellow spot.

The discussion of appearance and wearing of glasses, automobile driving with defective vision, injuries, nerves of the eye, night blindness, etc., indicate a careful preparation and understanding. The author does not give treatment, he advises against self-treatment. The book is written for general use.

LAUGH AT THE LAWYER WHO CROSS EXAMINES YOU! A Court Room Antidote. By Charles L. Cusumano, LL.B., of the New York Bar. New York: Old Faithful Publishing Co., 1942.

The practice of the court room, and its means of determining justice are minutely set forth in this little book. The definition of what a witness is, and how he will be handled, the practices and customs of lawyers and courts, are given in a narrative form. A numbe of rules are given for the benefit of those who onl occasionally will become witnesses, such as: preserv the evidence, write it down so as not to forget; revie the case with the attorney, review the facts befor going on the stand; avoid contradictions; understan the theory of the case; aim to convince, be ready fo cross examination, etc., to a total of twelve rules. Ther is a chapter on doctors as expert witnesses, wit cautions and an exposition of the witness' rights. Th book is interesting to pick up and read leisurely. Ther are many valuable hints, but the title is not entirel literal. The book strikes us as advisory rather tha facetious.

HYPERTENSION. Summarizing Present Status of Inci dence, Mortality, Morbidity, Symptoms, Classification Pathogenesis, and Treatment of Arterial Hypertension Chicago: Van Patten Pharmaceutical Co. On Request.

This forty page paper covered monograph is pub lished without advertising in cover or text, and is a concise treatise on the subject. Graphs and charts are given. Diagnosis and clinical course, mechanism of elevating the blood pressure, and the latest information on treatment. It is a quick reference to late material.

THE PRINCIPLES AND PRACTICE OF WAR SURGERY. With Reference to the Biological Method of the Treatment of War Wounds and Fractures. By J. Trueta, M.D., formerly Director of Surgery, General Hospital of Catalona, University of Barcelona; Assistant Surgeon (E.M.S.) Wingfield-Morris Orthopaedic Hospital, Oxford. With Introduction by Owen H. Wangensteen, M. D., Minneapolis, Minn. 144 Text Illustrations. St. Louis: The C. V. Mosby Company, 1943. Price, $6.50.

The Spanish War was the occasion for much new knowledge besides modern war. Doctor Trueta developed and tried out his theories of the treatment of wounds, by what he calls the biological methods. This is the Doctor's second volume, but is much more extensive and he has carefully expounded his theories. Since the Spanish war he has had opportunity to work at the Wingfield-Morris Orthopaedic hospital and extend his researches. This material has all been given with detail and profuse illustrations. History of war surgery, and treatment of the prevailing infections and complications is given. Gas gangrene has a chapter. Blood transfusion, anesthesia, chemotherapy, shock are considered, then follows chapters on wound excision, drainage, reduction of fractures, use of plaster of Paris, skin grafts, et cetera. Plaster of Paris fixation is the all-important part of Trueta's treatment, but there are many other things he does, that are important. This little book is a valuable addition to any surgical library.

DOCTOR IN THE MAKING. The art of being a medical student. By Arthur W. Ham, M.D., Associate Professor of Anatomy, Toronto University, and M. D. Salter, M.A., Ph.D., Lecturer and Research Fellow in Psychology, University of Toronto. Philadelphia: J. B. Lippencott Company. 1943. Price, $2.00.

This little book presents in entertaining form the thoughts and mental processes of a conscientious medical student. It would make good reading for the young person contemplating the study of medicine.

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WAR BULLETINS

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One of the most recent organizations is the Fighter Families Front, abbreviated into the Triple F, whose personnel is confined to immediate members of families which have husband, father, brother or son in the armed forces of this country or on the fighting front. It has been established and promoted chiefly by medical men closely associated with war service. Each group is an independent organization of about half a dozen persons, with no paid executives, national or regional organization, and nonpartisan. Reasons for these small memberships are opportunity of independent action to local conditions and absence of other pressure groups, but including coöperation with similar groups.

The sole object of this enterprise is to establish uninterrupted maximum production and transportation of war materials for the individuals in whom the members are interested. Thus it is proposed to provide them with an abundance of supplies and eventually to return them in safety or, in the event of disability or death, to continue supplying their comrades with comforts and fighting materials. — Editorial, *Northwest Medicine,* April, 1943.

MEDICAL MEN AT THE FRONT

Northern Tunisia—May 11, 1943 (By Ernie Pyle to *The Detroit Free Press*) : I hope somebody in this war writes a book about the medics at the front. They are a noble breed. They and the telephone linesmen deserve more praise than I have words for. Their job is deadly, and it never ends. Just in one battalion several of the battlefield medics have been killed, and a number decorated.

But noble as it is, it seems to me—and to the doctors themselves—that our battlefield medical system isn't all it should be. There aren't enough stretcher-bearers in an emergency, and in a recent battle at which I was present some of our wounded lay as long as 20 hours before brought in.

Medical Tasks in Peaks

The work of the medics comes in peaks. If they had enough stretcher-bearers for all emergencies there would be thousands of men sitting around most of the time with nothing to do. Yet when an emergency does come and there are not enough, it's an awful thing.

* * *

Wounded men have a rough time of it in this rocky, hilly country of Northern Tunisia. It is hard enough when you aren't carrying anything, but when two or four men are lugging 200 pounds on a stretcher it is almost impossible to keep on their feet. I have seen litter-bearers struggling down a rocky hillside with their heavy burden when one of them would slip or stumble on a rock and fall down, and the whole litter would go down, giving the wounded man a bad shaking-up.

Sympathy Maintained

Litter-bearers sometimes have to carry wounded men five miles or more over this rugged country. A bearer is just about done in by the time he does that, yet in battle he has to start right back again. And somehow, even though it gets to be just a miserably tough job, I've noticed that they manage to keep their sympathetic feeling for the wounded.

* * *

We've heard stories about the Germans shooting up ambulances and bombing hospitals, and I personally know of instances where those stories are true. But there also are stories of just the opposite nature. Many of our officers tell me the Germans have fought a pretty clean war in Tunisia. They do have scores of crafty, brutal little tricks that we don't have, but as for their observance of the broader ethics of war, our side has no complaint.

One battalion surgeon told me of running his ambulance out onto a battlefield under heavy artillery fire—whereupon the Germans stopped shelling and stayed stopped while he evacuated the dead and wounded for eight hours.

I've heard other stories where our ambulances got past German machine-gun nests without knowing it until the Germans came out and stopped them and, seeing they had wounded, waved them on. And so far as our doctors know, the German doctors give our captured wounded good medical care—as we do theirs also, of course.

* * *

In the last war nerve cases were called "shell shock." In this war they're called "anxiety neurosis." About 50 per cent of our neurosis cases are recoverable, and even return to fighting units.

A large proportion of these cases is brought about by complete fatigue, by fighting day and night on end with little sleep and little to eat.

Surgeons sometimes spot neurosis cases that they suspect of being faked in order to get out of the front lines. Their system is to put these men on stretcher-bearer duty—a hard, thankless, dangerous task. If they are faking they get well quickly and ask to be returned to their regular outfits.

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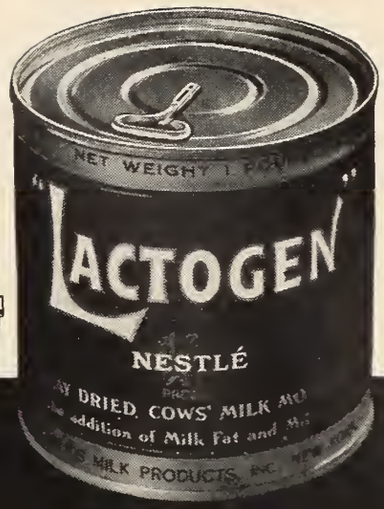
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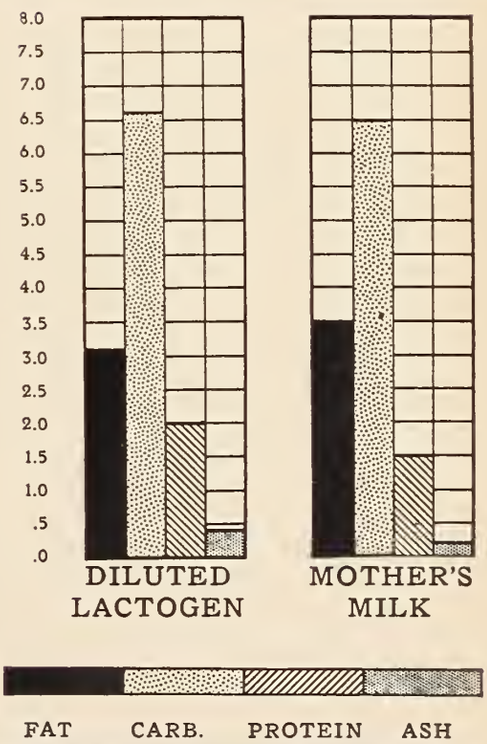


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John Lovett Morse, A.M., M.D.
Clinical Pediatrics, p. 156.

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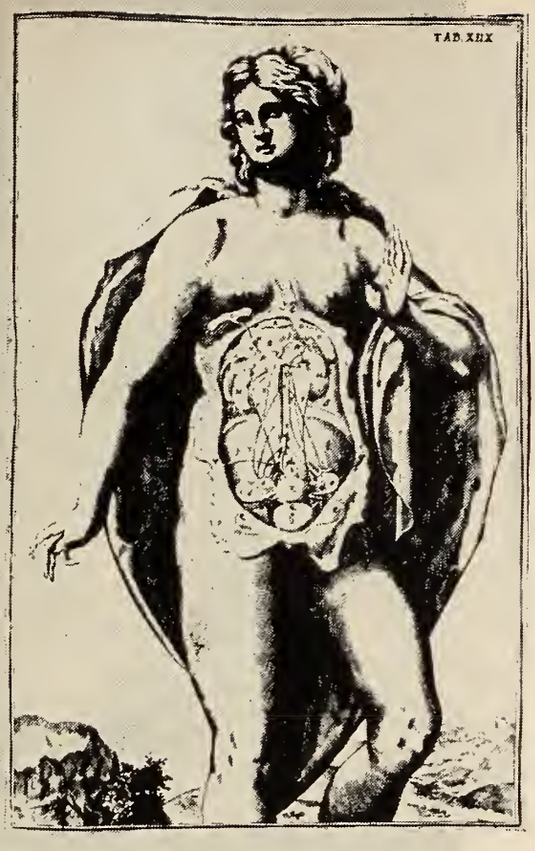
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The art of anatomic illustration entered a new epoch upon the publication of the Tabulae Anatomicae of Giulio Casserio (Venice, 1627). This female figure is one of Casserio's most beautiful copperplates.



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READING NOTICES

THE MEAD JOHNSON COLLECTION OF PEDIATRIC ANTIQUES

From a personal hobby enjoyed by the late E. Mead Johnson, Jr., the Collection of Pediatric Antiques, illustrated in the pages of a catalogue just issued, has evolved into one of considerable historical importance, depicting as it does the progression of infants' feeding vessels from the Greece of twenty-five centuries ago down to time within our own memory.

The Collection has been steadily growing in size and scope and is of increasing interest for teaching purposes via the historical route. The destruction of original sources caused by the war tends to add to the value of these objects.

Hence it is that, by request, the Collection now goes on an annual pilgrimate to colleges, hospitals, museums, libraries and other institutions of learning. Arrangements may be made for "stop-overs" upon application to the curator. Mead Johnson & Company, Evansville, Indiana, U. S. A.

* * *

POSTOPERATIVE VITAMIN DEFICIENCIES

A number of laboratory procedures have been developed in recent years to augment the clinical diagnostic approach to vitamin deficiency disease, but many of them require special equipment and are not easily adaptable for routine clinical use. Physicians may obtain a list of vitamin values of foods and a bibliography of important and generally informative papers on vitamins by writing Eli Lilly and Company, Indianapolis.

* * *

NEW PREPARATION FOR X-RAY VISUALIZATION

Priodax, a new type preparation in tablet form for x-ray visualization of the gall bladder, is being distributed by Schering Corporation, Bloomfield, New Jersey. Research reports show clearly certain differences between Priodax and the several dyes in powder form now in use. As a tablet, Priodax can be swallowed whole, thus eliminating the obnoxious symptoms associated with powders. Patient reaction and nausea are infrequent. Because Priodax contains no phenolphthalein, severe diarrhea is rare. Vomiting which often follows the use of the older preparations is said to occur in less than 3 per cent of the cases who receive Priodax.

Chemically Priodax is beta—(4-hydroxy-3, 5-diiodophenyl)—alpha-phenylpropionic acid containing 51.5 per cent of iodine firmly bound in a stable organic molecule. After being absorbed from the enteric canal, the iodine molecule passes through the liver and is excreted into the gall bladder providing an excellent contrast medium for diagnosis x-ray visualization.

* * *

MASSIVE DOSES OF VITAMIN D

To provide massive doses of vitamin D for use in the treatment of hypoparathyroid tetany and certain types of rickets, E. R. Squibb & Sons, New York, are now supplying capsules of Viosterol, each containing 50,000 U.S.P. units of vitamin D_2. The capsules are packaged in bottles of 40 and 100.

* * *

NEW RESEARCH DIRECTORS NAMED

Maurice L. Moore, formerly research chemist in the Medical-Research Division of Sharp and Dohme, Inc., has joined the Scientific Laboratories of Frederick Stearns & Company, Detroit, Michigan, as Director of Organic Research.

Maurice L. Tainter, M.D., professor of pharmacology at Stanford University, and also professor of pharmacology and head of the division of physiological sciences, College of Physicians and Surgeons, San Francisco, California, has been named research director of the Winthrop Chemical Company, Inc., according to an announcement by Dr. Theodore G. Klumpp, president.

SOCIAL INSURANCE IN THE UNITED STATES

1. *What are some forms of social insurance in the United States?*

(a) Federal government: Old age and survivors' insurance and unemployment insurance under the Social Security Act; war risk insurance; old age pensions and unemployment insurance under the Railroad Retirement Act and Railroad Unemployment Insurance Act.

(b) State: Several states have workmen's compensation funds; Rhode Island recently enacted a sickness benefit law.

(c) Insurance companies: Life insurance and annuities; accident and health insurance; workmen's compensation insurance; hospital insurance; auto liability.

(d) Coöperative insurance (employee benefit associations and labor unions): Life insurance and accident and sickness benefits.

(e) Hospital associations (Blue Cross): Hospital service.

(f) Medical associations: Medical and surgical care.

2. *What is the history of compulsory social insurance legislation in the United States?*

In 1916 and later, bills were introduced in several states proposing compulsory state health insurance (socialized medicine and cash benefits).

Attempts were made in the 1920's to establish state old age pensions and unemployment insurance.

The "Committee to Study the Costs of Medical Care" in 1927 made a report based on a survey of public health, medical expense, and loss of wages due to illness.

President Roosevelt in 1933 appointed a "Committee on Economic Security" to draft the present Social Security Act. The original draft included the recommendation of provisions for disability (accident and sickness) coverage.

The Social Security Act was enacted into law in 1935 and amended in 1939.

In 1938 an "Interdepartmental Committee to Coördinate Health and Welfare Activities," which had been appointed by President Roosevelt, made a report asking for the extension of the Social Security Act to include compulsory health insurance.

1939-1940: Wagner and Capper Bills introduced in Congress providing for Federal health insurance.

1942: Eliot Bill introduced in Congress providing for extension of Social Security Act to include disability (accident and sickness) benefits and hospitalization benefits.—Insurance Economics Society of America, Chicago.



Antiseptic and Germicide with a New Chemical Structure

Zephiran Chloride is a mixture of high molecular alkyl-dimethyl-benzyl-ammonium chlorides, and represents a new concept of bacterial destruction on the basis of a cationic detergent.

Welch and Brewer* state that the protective action of the blood plays an important role in infection, and the indiscriminate application of antiseptics which destroy this function at dilutions which cannot destroy bacteria is a harmful practice.

Though a very potent germicide and according to their studies capable of destroying Staphylococcus aureus in a concentration of 1:6,250 in 10% serum, they found Zephiran Chloride non-injurious to the delicate phagocytic mechanism of the white blood cell in concentrations up to 1:3,000. Expressed in terms of the toxicity index, Zephiran Chloride was rated as 0.48 whereas alcohol was shown to have a toxicity index as high as 7.5.

Zephiran *CHLORIDE*... Germicide for Surgery, Obstetrics and Gynecology, Urology, Dermatology, Eye, Ear, Nose and Throat, Sterile Storage of Instruments

*Welch, H., and Brewer, C. M.,: The Toxicity-Indices of Some Basic Antiseptic Substances, Jl. of Immunology, Jan., 1942.

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COUNTY MEDICAL SOCIETY MEETINGS

Berrien—May 11, 1943, Mercy Hospital—Speaker: A. S. Giordano, M.D.

Genesee—April 27, 1943, Elks Temple—"The Differential Diagnosis and Management of Hypertension" was discussed by Gordon B. Myers, M.D. "The Indications for and the Use of Plasma Transfusions" by John W. Hirshfeld, M.D. Drs. Gordon B. Myers and John W. Hirshfeld followed with a clinical dialogue on "The Newer Concepts in the Diagnosis and Management of Diseases of the Liver."

May 11, 1943, Elks Temple—Speakers and Subjects: "Recent Advances in Immunization Procedures" by Franklin Top, M.D. "Recent Advances in Obstetrics" by Robert B. Kennedy, M.D. "The Diagnostic Significance of Pain." Panel discussion by Drs. Carl G. Heller, Russell T. Costello and Charley J. Smyth.

Gratiot-Isabella-Clare—April 23, 1943, Park Hotel—Rep. T. Jefferson Hoxie discussed "Legislation of Interest to the Medical Men."

Hillsdale—April 13, 1943—Speaker: Charles F. McKhann, M.D., discussed "Nutritional Problems."

May 11, 1943—Speaker: Marguerite Hall, M.D., Subject: "Medical Measurements."

Ingham—May 6, 1943, Ninth Annual Clinic, Hotel Olds, 175 attended Clinic and Dinner—Speakers and Subjects: "Management of Heart Disease and Its Relation to Employment," round table discussion led by Drs. Don C. Sutton and Nathan Smith Davis, III, both from Chicago, Illinois. "Dislocations and Their Complications" by James J. Callahan, M.D., Chicago, Illinois. "Differential Diagnosis of Cerebral Irritation" by John A. Toomey, M.D., Cleveland, Ohio. "Tropical Diseases" by Col. Walter B. Martin, Battle Creek, Michigan. "The Doctor in the War," by Lt. Col. Harold C. Lueth, Chicago, Illinois.

Ionia-Montcalm—April 20, 1943, Ionia State Hospital—Speaker: Norman Westlund, M.D., spoke on "Emotional Factors in Physical Illness."

Jackson—April 20, 1943, Hotel Hayes—Speakers and Subjects: "Differential Diagnosis and Management of Hypertension" by Gordon B. Meyers, M.D. "Indications for and the Use of Plasma Transfusions" by John W. Hirshfeld, M.D.

Kalamazoo—April 20, 1943, Bronson Hospital—Speakers and Subjects: "Recent Advances in Immunization Procedure" by Franklin Top, M.D., Detroit. "New Drugs of Analgesic and Anesthetic Value in Obstetrics" by Harold Henderson, M.D., Detroit. "Diagnostic Significance of Pain," panel discussion led by Drs. Carl G. Heller, Russell T. Costello and Charles J. Smyth.

April 22, 1943, Bronson Hospital—Speakers and Subjects: "Differential Diagnosis and Management of Hypertension" by W. L. Lowrie, M.D. "The Indications and Use of Plasma Transfusion" by Lawrence B. Fallis, M.D. "The Newer Concept in the Diagnosis and Management of Diseases of the Liver," panel discussion led by Drs. John G. Mateer, Fallis and Lowrie.

Kent—May 11, 1943, Browning Hotel—Speakers and Subjects: "The Differential Diagnosis and Management of Hypertension" by H. H. Riecker, M.D. "The Indications for and the Use of Plasma Transfusions" by J. Matthews Farris, M.D. "The Newer Concepts in the Diagnosis and Management of Diseases of the Liver." Clinical dialogue by Drs. H. H. Riecker and J. Matthew Farris.

St. Joseph—April 20, 1943, Hotel Elliott—Speaker: Hazel Prentice, M.D., spoke on "Pathology."

Washtenaw—May 11, 1943—Speakers and Subjects: "Recent Advances in Immunization Procedures" by Charles F. McKhann, M.D. "Recent Advances in Obstetrics" by Norman F. Miller, M.D. "The Diagnostic Significance of Pain," panel discussion led by Drs. R. H. Freyberg, Russell N. DeJong and R. H. Lyons.

Wayne—April 19, 1943, Art Institute Lecture Hall—Speakers and Subjects: "Glandular Failure in Men" by Carl George Heller, M.D. Preceding the meeting Frank W. Hartman, M.D., presented a pathological demonstration.

May 3, 1943, Art Institute Lecture Hall—General Meeting.

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The JOURNAL
of the Michigan State Medical Society
Issued Monthly Under the Direction of the Council
Volume 42 June, 1943 Number 6

Nasal Allergy*

By George E. Shambaugh, Jr., M.D.
Chicago, Illinois



A.B., Amherst College, 1924; M.D., Harvard Medical School, 1928. Chairman, Dept. of Otolaryngology, Rush Medical College, 1938-41; Associate Professor of Otolaryngology, Univ. of Ill., 1941; Consultant in Otology, Municipal Contagious Disease Hospital, Chicago, 1934-41; Assistant Professor of Otolaryngology, Northwestern University Medical School, 1942 at present.

The normal defense mechanisms of the nose and sinuses are sufficient to result in complete clearing of a great majority of all acute infections, if the tissues are put to rest. The chronicity of infections in the nose or sinus are due either to the type of infecting organism, usually anaerobic, or to an underlying allergy.

The majority of chronic sinus infections are due to a combination of infection and underlying allergy. Differentiation of the two types of chronic sinusitis is possible since each type has certain characteristics. These characteristics will be described and the diagnosis and treatment of the underlying allergic factor will be discussed. The best therapeutic results are when both the infection and the allergic factor are treated simultaneously.

■ Chronic nasal and sinus infections make up a considerable part of the office practice of otolaryngology, and one of the most unsatisfactory parts as far as the results of therapy are concerned. Hyperesthetic rhinitis, catarrhal rhinitis, hyperplastic rhinitis and certain cases of chronic sinusitis are all characterized by their tendency to chronicity and recurrence in spite of prolonged local therapy and repeated surgery. The failure to produce complete and permanent cure by local therapy in this large group of cases has led to a study of the underlying etiologic factors responsible for the chronicity of these conditions. We are finding that an underlying allergy is perhaps the most important of these etiologic factors. The fact that allergy may cause non-seasonal year around symptoms as well as seasonal hay fever, is not new. What is relatively new is the idea that an underlying allergy can cause a chronic suppuration in the sinuses, often without the sneezing and watery discharge characteristic of an allergic reaction. My aim is to present to you in a simple and practical way the methods of diagnosis of nasal allergy that have produced results in my hands. At the end I shall pass out mimeographed copies of the various diets, record cards and techniques that I use.

Cases of chronic sinusitis can be rather sharply and accurately differentiated into two varieties. This distinction is of fundamental importance in determining the underlying cause for the chronicity of the infection, and in obtaining therapeutic results. The first variety we may call the pure infection chronic sinusitis, for in these cases the chronicity is due to the type of the infecting organism rather than to any underlying systemic factor. The second variety is called the allergic chronic sinusitis. In this group the chronicity is due to the underlying nasal allergy which, by its recurring or persisting edema of the mucosa prevents the sinuses from draining and the infection from clearing.

Superficially both types of chronic sinusitis appear similar, in that both have pus in the sinuses, and in the past no clear distinction was made between them. However, if we study our cases of chronic sinusitis closely we will find that they fall into two groups each having certain characteristics by which it can be clearly and definitely differentiated from the other (Table I.). Sometimes, to be sure, we encounter a case of chronic sinusitis which is not easily classified, and con-

*Read at the Seventy-seventh Annual Meeting of the Michigan State Medical Society in Grand Rapids on September 25, 1942.

TABLE I.

	PURE INFECTION CHRONIC SINUSITIS	ALLERGIC CHRONIC SINUSITIS
Comparative Frequency	30% (or less)	70% (or more)
Etiology	Anaerobic type of streptococcus	Infection with staph or strep secondary to chronic allergic edema with impaired drainage.
Onset	(a) Follows an abscessed upper molar tooth (b) Follows a severe upper respiratory infection such as scarlet fever	Insidious or may date from an ordinary head cold.
Sinuses Involved	Maxillary most often. Tends to be confined to one side of the nose	Ethmoid sinus most often involved. Tends to be bilateral and to involve all of the sinuses more or less.
Nasal Mucosa	Unchanged except at the sinus ostium where it is inflamed and may be hypertrophied.	Same changes as in the sinuses: edema, polypoid changes, excessive secretion of mucous.
Symptoms	Minimal: scant post-nasal discharge. Occational foul odor, rarely headaches. Systemic symptoms frequent: arthritis, neuritis, etc.	Maximal: nasal blocking, sneezing, coughing. Profuse muco-purulent nasal and post-nasal discharge. Headaches frequent and severe. Fatigue, lassitude and sometimes G. I. symptoms.
Histology of Sinus Mucosa	Epithelium normal. Subepithelial connective tissue slightly thickened with infiltration with plasma cells and polymorphonuclear leukocytes	Epithelium desquamating, increased number of gobletcells, basement membrane thickened. Edema of subepithelial connective tissue, infiltrated with eosinophiles in addition to plasma cells and polymorphonuclear leukocytes.
Irrigation	Liquid pus, often very foul	Gelatinous or tenacious mucopus.
Cytology of Pus	Neutrophiles only	Few to many eosinophiles mixed with the neutrophiles.
Treatment	Irrigations may effect a cure, but *ventilation* usually required by means of a window operation.	Remove the allergic factor and the infection tends to clear up, or responds rapidly to a few irrigations or to surgery.
Prognosis	Excellent. Once cleared does not recur.	Poor if allergic factor is untreated. Good if allergic factor is removed and the infection is treated simultaneously.

siderable observation and study may be required before we can say definitely that there is or is not an allergic factor underlying the chronic infection.

The essential difference between the pure infection and the allergic sinusitis is seen in the gross and microscopic changes in the mucous membrane, for remember that in chronic sinus infections the disease is fundamentally of the lining mucosa. Rarely is the bone involved and then only secondarily to an acute exacerbation.

In the pure infection chronic sinusitis the mucous membrane of the sinus appears inflamed and moderately thickened, but without much edema, and as a rule without polypoid changes. Microscopically the columnar ciliated epithelium is intact, the subepithelial connective tissue is densely infiltrated with round cells and plasma cells, with a few neutrophilic lymphocytes, but without eosinophiles. There is little edema, and the thickening of the membrane is largely due to fibrous tissue increase and cellular infiltration.

In the allergic chronic sinusitis the mucous membrane of the sinus appears pale, markedly edematous, tremendously thickened and thrown into polypoid folds. Microscopically the epithelium is filled with mucous secreting goblet cells and is often desquamating. The subepithelial

connective tissue is extremely edematous, and is infiltrated with a few round cells and plasma cells and many eosinophilic leukocytes which may be seen migrating through the basement membrane and epithelium into the lumen of the sinus.

Of great importance and significance is the fact that the pathologic changes in the pure infection sinusitis are confined to the affected sinus or sinuses, the other sinuses, usually on the opposite side of the nose remaining completely normal. The nasal mucosa is also perfectly normal except in the immediate vicinity of the sinus ostium where there may be inflammation and hypertrophy, sometimes with localized polypoid changes.

In the allergic sinusitis on the contrary, the edema of the mucosa involves not only all of the sinuses to some degree, even those that are not actively suppurating, but also the nose and even the bronchi. It is a mistake to attribute asthmatic bronchitis to the accompanying sinusitis, or vice versa—both are the result of the underlying allergy which affects all the respiratory mucosa. This same underlying allergy may cause a recurrence of the sinus infection after the most radical surgery, once the sinus mucosa has had time to regenerate. The chronicity of the infection in allergic sinusitis is due to the underlying allergy. If the offending substance can be discovered and removed the infection tends to clear up spontaneously, or it will clear up completely and permanently with appropriate treatment. However, as long as the allergy remains undetected and untreated the infection tends to persist or to recur in spite of prolonged treatment and many operations.

The credit for directing our attention to the underlying allergic factor in chronic nasal and sinus infections belongs to Dr. French Hansel of St. Louis. Primarily a rhinologist, Hansel was dissatisfied with the results of the usual treatment of these cases, and he began to make his own allergic studies, with a great improvement in his therapeutic results. The reason for his improved results is simple. The average patient cannot afford the time and expense of repeated visits to an allergist and a rhinologist for his chronic nasal trouble, and he will neglect either the one or the other. *To obtain the best results both the infection and the allergy must be treated simultaneously.* The only practical method of obtaining this is, I believe, for the rhinologist to become his own allergist.

The proof of nasal allergy depends, in the last analysis, upon the therapeutic test. If removal of a specific substance relieves the symptoms, and exposure to the substance then produces the symptoms, and if it does not produce symptoms in the normal individual, then we know that the patient is allergic to this substance, that is, he reacts abnormally to it. The term allergy means "altered reactivity." The whole conception of allergy and our knowledge of it is relatively new. It is one of the rapidly advancing frontiers of medicine. There are still those who would like to disregard its existence or to minimize its importance because they have not taken the trouble to learn about it.

Nasal allergy is produced by two kinds of substances: by inhalants such as pollens, house dust and animal danders, or by ingestants such as foods and drugs. The skin tests, scratch or intradermal, are of considerable help in the diagnosis of inhalant allergies, but these tests must be regarded as an aid to diagnosis rather than as the means of diagnosis, for we frequently observe a strongly positive skin test without clinical symptoms, and occasionally a negative skin test with definite clinical symptoms for that substance. Again I repeat that the diagnosis of an allergy can be made only by the therapeutic test. There has been too much dependence upon the skin tests, particularly in food allergies, for whereas the skin tests help in the diagnosis of the majority of inhalant allergies, they are much less reliable in the discovery of food allergies. The diagnosis of food allergy depends for the most part upon careful clinical observation and experiment using various elimination diets.

The first step in the diagnosis of nasal allergy is to differentiate the allergic from the nonallergic nasal and sinus disease. Cytologic examination of the nasal smear for eosinophiles is a valuable aid, but here again the nasal smear must be regarded as an aid and not as the means of diagnosis, for sometimes repeated nasal smears are necessary before eosinophiles can be demonstrated in a case of proven nasal allergy.

The allergic history is a great help in the detection of the allergic substance. In my experience the history is more valuable than the skin tests, particularly in the case of food allergies.

Nasal symptoms that begin the middle of August and end with the first frost are probably due to sensitivity to ragweed pollen. Nasal symptoms that begin in May or June and last until frost are usually due to the mold Alternaria. On the other hand nasal symptoms that develop during the winter, clear up in the summer and recur again when the steam heat is turned on the next winter are nearly always the result of house dust sensitivity. Nasal symptoms that continue the year around without change, and especially when associated with headaches and gas after eating, are probably due to food allergy.

The methods used for the diagnosis and treatment of nasal allergies and the results obtained can best be illustrated by some specific case reports.

Case Reports

House Dust Sensitivity

Mrs. G. G., aged thirty-three. Asthmatic cough, sneezing, complete nasal blocking and watery nasal discharge since childhood, worse when exposed to house dust. For three months she had been miserable, unable to sleep because of the severe cough, unable to breathe at all through the nose. Local nasal treatments elsewhere were of no benefit. House dust ++, feathers +±, given 0.05 c.c. 1:100,000 dust with almost complete relief, complete after three more injections.

Dr. R. C. G., aged fifty. Sinus trouble since a child with turbinectomy, ethmoidectomy, removal of polyps and repeated irrigations of maxillary sinus. Better in summer, worse in winter. Intradermal dust test, ++. After three injections 0.05 of a cubic centimeter, 0.1 c.c. and 0.2 c.c. of a 1:100 solution, complete relief from all symptoms for three weeks, then recurrence. Advised to continue shots; complete relief. Nasal polyps which nearly filled nasal passages completely disappeared. One and one-half years later returned with nasal blocking, polyps and excessive thick mucus. 0.05 c.c. 1:10,000 dust increased gradually to 0.1 c.c. 1:1,000 with complete relief and polyps gone. To continue 0.1 c.c. 1:1,000 every three weeks as maintenance dose.

Miss C. E., aged twelve. Chronic productive cough and chronic nasal blocking and mucopurulent discharge since age of four with three attacks of pneumonia. Treated for four years by window operation on maxillary sinus, nasal packs, displacement suction of the ethmoid and irrigation of the maxillary sinus but nearly always pus was obtained from the antrum and ethmoid, and the nasal mucosa was boggy and swollen. Purulent bronchitis treated by repeated bronchoscopic aspirations. Allergy first suspected when several months in a convalescent camp resulted in complete disappearance of all symptoms but a recurrence within three weeks after returning home. Intradermal test with house dust negative. Because of history, given injections of house dust extract with prompt and lasting relief on a maintenance injection once a month for two years.

Mr. M. A. R., aged fifty-three. Sinus trouble for many years with operation on frontal sinus thirty-three years ago. Postnasal discharge, nasal blocking and frontal headaches. Ephedrine spray gives partial relief. Treated by displacement suction of the ethmoid with temporary improvement for four years. Then noted that on a western trip symptoms entirely disappeared for three weeks but recurred a few weeks after return home. Intradermal test to dust negative but noted that exposure to dust increased his symptoms. Treated with dust extract injections with complete relief: "felt as well as out west."

Miss D. H., aged twenty-three. Asthma since age of twelve with nasal blocking, sneezing and excessive mucoid discharge. Treated by two well-known allergists without relief. Intradermal test to autogenous house dust ++++. Given 1:100,000 dilution beginning with 0.05 c.c. Within three weeks asthma and nasal symptoms better than for many years and two months later no asthma as long as she remembers to take dust shots.

Allergy to Food

Dr. M., aged fifty-nine. Bilateral purulent nasal discharge and blocking with headache for three months following influenza. Also severe, cramplike abdominal pains. Intradermals on common foods and dust negative but recalls that never liked milk and that cream sometimes caused diarrhea. Omitted milk, cream and cheese and within twenty-four hours all symptoms had completely cleared.

Miss R. M. (daughter of Dr. M.), aged twelve. Stuffy nose with excessive thick mucoid discharge as long as she remembers. For eight years periodic headaches with vomiting. For six months profuse purulent nasal discharge. Intradermals to common foods and dust negative except for milk which was two plus. Milk, cream and cheese omitted. Complete relief within one week. No recurrence.

Mr. J. D. M., aged thirty-seven. Sinus trouble for fifteen years with nasal blocking and purulent nasal and post-nasal discharge and headache. Pus coming from all sinuses with polyps. Septum straightened, ethmoids opened, polyps removed followed by irrigations of antra and displacement suction of ethmoids one to two times a week for one and one-half years. Intradermals: chocolate +. Omitted chocolate with complete freedom from all symptoms within three days. Six months later ate large piece of chocolate. Within twenty-four hours had severe sore throat with temperature of 104 degrees and acute symptoms of otitis media. No nasal symptoms.

Miss B. McH., aged twenty-four. Constant mild sore throat, nasal blocking and fatigue. A year later acute suppurative maxillary sinusitis lasting six weeks. Two years later complained of pains around eye and cheeks, blocked nose, purulent nasal and postnasal discharge. Has been present off and on for eight years. Sinus irrigated at intervals for several months. Two years later: increased blocking and purulent discharge. Intradermals: Wheat +, chocolate and coffee ±. Omitted these with complete relief until one evening ate chocolate and coffee. Recurrence for twenty-four hours. Had noted that "starches" disagreed with nose.

Mrs. C., aged thirty-six. Nasal stuffiness and thick discharge since childhood. Sinus trouble for eight years with headache, purulent discharge, sneezing and blocking. Worse in winter. Relieved by trip to Arizona. Dust +±, wheat, ++ chocolate, +, onion +±, tea +++. Complete relief by dust injections and omitting foods, more complete than by trip to Arizona. Nose freer from stuffiness than at any previous time.

Mr. R. M., aged fifteen. Nasal blocking for two years with excessive clear thick mucus. Has had to give up all sports. Large amount of green mucopus washed from both antra. Eosinophiles +++. Drinks more than one quart of milk a day. Omitted milk with complete clearing of all symptoms in two weeks. Resumed milk and that night had nasal blocking.

Reviewing a series of 102 consecutive patients with chronic nasal or sinus disease, I found that half were classed as chronic rhinitis with comparatively little sinus involvement, and half were diagnosed as chronic rhinitis. The proportion in each group showing a definite allergic factor was as follows:

	Allergic factor proved	No allergic factor proved
Chronic rhinitis	43	8
Chronic sinusitis	36	15

In conclusion, the points which I wish to bring out are:

1. An allergic factor is present in the majority of chronic nasal and sinus infections.

2. If the allergic factor is found and removed, the nasal or sinus infection tends to clear spontaneously or with a few treatments, and does not tend to recur. If the allergic factor is overlooked, the condition tends to persist or recur in spite of prolonged local treatment and repeated surgical procedures.

3. The best results in chronic nasal and sinus disease will be secured only when the rhinologist becomes his own allergist, for both the allergic factor and the secondary infection must be treated simultaneously by the same person to obtain the optimum results.

4. The diagnosis of an allergy must be based on the therapeutic test: relief from the symptoms when the substance is removed, and recurrence of the same symptoms when exposed to the substance. The history, the skin tests and the nasal smear must be regarded as aids but not the means to diagnosis.

5. The discovery of inhalant allergies is greatly helped by the skin tests, whereas food allergies are less likely to be discovered by skin tests and require the use of an elimination diet.

6. House dust sensitivity is the most frequent single cause for chronic nasal and sinus disease. Treatment with very small doses of a very dilute extract will give better results than the large doses customarily used.

7. Chronic sinusitis can be sharply and accurately differentiated into two definite and distinct varieties, the pure infection sinusitis and the allergic sinusitis, each with its own histologic changes, each with its own clinical characteristics, and each requiring a different therapeutic approach. If this differentiation be made with care the results of therapy in chronic sinus disease will be satisfactory in the great majority of cases.

MSMS

Most fractures of the acetabulum carry a very guarded prognosis.

* * *

The knife-like pain accompanying metatarsalgea is often relieved by a metatarsal bar.

* * *

Intertrochanteric fractures of the hip can be very successfully plated and thereby spare the patient the necessity of immobilization in a cast.

* * *

In treating supracondylar fractures of the elbow in children, it is wise to check the circulation in the fingers every hour for two days so as to avoid a Volkmann's contracture.

* * *

Elderly patients having severe hypertrophic arthritis of the knee may be benefited by removal of the patella.

—Eugene W. Secord, M.D., Detroit.

Management of the Barren Marriage*

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Women tend to assume full responsibility for their inability to become pregnant and most scientific papers dealing with this problem have been entitled "Female Sterility." However, the term "Barren Marriages" is more appropriate because it emphasizes the mutual responsibility of both the husband and the wife, in their failure to have children. The majority of barren marriages result, not from a single cause in one spouse, but from a multiplicity of factors in both; some may seem trivial but, added together, they are sufficient to prevent conception. Successful management, therefore, depends on adequate examination of both the husband and the wife, followed by systematic elimination of every contributing factor from each of them.

This presentation, first, enumerates the essentials of a diagnostic study which will reveal most factors that contribute to a couple's infertility. It then deals with the accepted present-day treatment for the contributing causes which occur in women.

■ Management of Barren Marriages will be presented from the viewpoint of a gynecologist. This is a practical approach to the problem, since it is the wife who first seeks advice, when she fails to become pregnant.

It is amazing that women should accept full responsibility for their failure to conceive and is equally inconsistent that scientific papers dealing with this problem are usually entitled "Female Sterility." The term, female sterility, implies that the husbands of these women are usually fertile; this is far from true. In fact, forty per cent of husbands must either share, or accept full responsibility for a childless union. In a series of twenty-five barren women who were under observation recently, only two of the husbands produced normal semen. A husband must not be absolved from responsibility for his wife's failure to become pregnant simply because his semen contains some actively motile spermatozoa.

To call these women sterility problems is inappropriate for other reasons. There are few individuals, either men or women, who should be considered absolutely fertile and, conversely, a very small percentage of them are absolutely sterile. Human beings, at best, are only *relatively* fertile; otherwise women would become pregnant every time they are exposed. Undoubtedly there are varying degrees of relative fertility even though there is no scale by which relative fertility can be measured, e.g.: Many couples, where both the husband and the wife must be of high fertility, have no difficulty in achieving pregnancies as promptly and as frequently as they wish; other couples, in which one spouse is apparently normally fertile and the other only moderately fertile, have children —but it may be months before the wife becomes pregnant. On the other hand, the marriage of individuals who are both of low fertility, is likely to result in a childless union. Occasionally such childless marriages are terminated by divorce; subsequently each may remarry and both may achieve pregnancies through the second marriage. Such phenomena could be explained on the basis of each new spouse being an individual of high fertility.

Consequently, "Barren Marriage" is a much more appropriate title for this problem; it emphasizes the mutual liability of both parties in the wife's failure to conceive. Furthermore, the majority of barren marriages do not result from an absolutely sterility either in the husband or the wife; there are instances of relative infertility brought about not by a single cause in one spouse, but by a multiplicity of factors in both of them; some of these causes may seem trivial but, added together, they are sufficient to prevent conception. Success in the relief of barrenness, therefore, depends on thorough examination of both the husband and the wife, followed by systematic elimination of every contributing factor from both of them. Only in this way can the relative fertility of the wife be improved.

Diagnostic Studies

The gynecologist, or the physician whom the wife first consults, is obligated to make a diagnosis, i.e., to discover all factors which have contributed to the barrenness of her marriage. He must not jump at conclusions and he dare not take anything for granted. His examination must

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be thorough and should include (a) a complete general physical survey, (b) a search for gross abnormalities in the female generative tract, (c) an evaluation of the male factor, (d) study of the uterine cervix, (e) testing of the fallopian tubes for patency, and (f) an investigation of the endocrine system.

A Complete General Physical Survey.—At her first visit the wife is subjected to a general physical examination; blood counts are made and urine is analyzed. At this time one should also attempt to evaluate the function of the glands of internal secretion, from the history, her height, weight and body configuration, together with the distribution of fat and hair. It may at once be apparent that a basal metabolic rate is indicated.

Gross Abnormalities in the Female Genitalia.—The lower genital tract is searched for infection—leukorrheal discharges, especially those resulting from cervicitis, are of considerable importance. The reaction of vaginal and endocervical secretions is easily ascertained with nitrazene papers. Normal cervical secretions are alkaline, the pH is 7 to 7.5; the healthy vagina is acid, the pH is 4 to 4.5. The cervix is not only inspected but its canal is also tested with cervical dilators to be sure that it is adequately patent.

The size of the uterus is significant. Hypoplasia may be suspected either from scantiness of menstrual flow, the presence of an elongated small cervix with tiny external os, or from the difficulty experienced in palpating the corpus; the length of the uterine cavity is ascertained with a sound; normally it is about 7.5 cm. long.

Retrodisplacement of the uterus, with anterior tipping of the cervix away from the seminal pool, has probably been over-emphasized as a cause of infertility. However, following Sampson's description of endometriosis, retroflexion assumed a more important role in the problem of infertility. Pelvic endometriosis may follow retrograde menstruation through the fallopian tubes, and such backflow of menstrual blood is most likely to occur when the cervix is stenotic, the uterus is retroflexed or fibroid tumors distort the uterine cavity. Pelvic endometriosis is found frequently in a private clientele, especially in young women who fail to become pregnant, and in older patients with cervical stenosis or uterine fibroids. Thus far there is no convincing explanation for the low fertility of women with pelvic endometriosis; their tubes are patent; they ovulate, and they may become pregnant, but not frequently. This condition should be suspected when the uterus is retroflexed and fixed, the ovaries are enlarged and adherent, and when there are tiny, firm, sensitive nodulations either in the cul-de-sac, the rectovaginal septum or on the uterosacral ligaments. If the patient complains of dysmenorrhea that has been acquired during adult life and consists, in part, of pain referred to the rectum, one can be almost certain that he is dealing with pelvic endometriosis.

Gynecologists disagree about the relationship of uterine fibroids to a woman's failure to conceive; however, no one denies that, through mechanical interference, these tumors may be responsible either for miscarriages, premature labors or dystocia at term. There is another phase of the fibroid question which merits some thought. Infertility and habitual abortion are closely allied problems, and certain instances of so-called infertility may, in reality, be cases of repeated early abortion—but the abortion occurs at such an extremely early stage that a gestation is not recognized. Very early spontaneous abortions may result from developmental defects either in the fertilized egg or in the endometrium. Since uterine fibroids tend to alter the normal physiologic response both of the ovaries and the endometrium, they may be of importance in the barren marriage problem.

Masses in the region of the tubes and ovaries may be either residues of pelvic inflammatory disease or cystic ovaries which signify either previous inflammation, endometriosis, endocrine imbalance or newgrowths. All may have considerable bearing on the problem of relative fertility.

The Male Factor.—The third step in this diagnostic study is an examination of the husband's semen. Preferably the specimen should be obtained after several days of continence. The semen should be transported in a clean glass container, not in a rubber condom, because the powder on a condom and the rubber itself may inhibit the motility of spermatozoa. The semen should be kept at room temperature since spermatozoa die more quickly at body temperature. One should determine (1) the amount of semen (it should be about 4 c.c.); (2) the number of

spermatozoa per cubic centimeter (the normal is said to be about one hundred million per cubic centimeter); (3) the motility of the spermatozoa (90 per cent should be actively motile and migrating at room temperature for some hours after ejaculation); (4) the morphology of the spermatozoa (at least 80 per cent should be normally formed), and (5) one should search for adventitious elements, such as leukocytes and red blood cells.

Most husbands consider themselves fertile if they are sexually potent; they actually believe that "patent tubes plus a potent male" should invariably result in a pregnancy. Too often physicians are guilty of further pampering this masculine ego, by accepting as normal, any specimen of semen which contains actively motile spermatozoa. The observations of Mazer and Israel are extremely pertinent. "The degree of fertility of the male decreases, and approaches zero, with diminution in the volume of semen, decline in the number and viability of spermatozoa, and with an increase in the percentage of abnormal forms." Consequently, the accepted criteria for a normal specimen of semen are reiterated; Amount—3 to 4 c.c.; Number of spermatozoa—approximately 100,000,000 per c.c.; Motility—90 per cent actively motile and migrating at room temperature; Morphology—80 per cent normally formed; and finally there should be no more than an occasional leukocyte or red blood cell per high power field. Husbands must be referred to a urologist if their semen does not conform in all respects to the aforementioned criteria for the normal. Although it only requires one spermatozoön to fertilize an egg, the husband with a reduced sperm count is essentially sterile. But be considerate of his ego when you inform a husband that he, in part at least, is responsible for his wife's failure to become pregnant. Men are very sensitive about their virility and fertility; being told that they are not 100 per cent fertile is very distressing, it may even precipitate a depressed state. Many a patient has asked me not to tell her husband that it is he who is infertile; obviously some wives would rather go childless than wound their husbands' pride.

Failure to recognize deficiencies in semen has been responsible for many failures with barren marriages. Possibly it would be best if all husbands were examined by a urologist, but preferably by one who is especially interested in the problems of male infertility.

Patency of Fallopian Tubes.—Patency of the fallopian tubes is determined by transuterine insufflation with carbon dioxide gas—this is the well-known Rubin test. I prefer an apparatus which receives CO_2 at a constant pressure, measures the volume of gas which passes into the abdomen and includes a mercury manometer. The ideal time to make this test is three to seven days after the conclusion of a menstrual period. Both uterine bleeding and active genital infections, are absolute contra-indications to this procedure. Under normal conditions, gas flows through the fallopian tubes freely at a pressure that fluctuates between 40 and 80 mm. of mercury. The escape of gas through the tubes is recognized by the behavior of the mercury column, by auscultation over the lower abdomen and by shoulder pain which appears when the patient sits up. If gas fails to pass through at 180 to 200 mm. Hg., the pressure should not be carried higher for fear of traumatizing the tubes. The position of the cannula in the uterus is changed several times, and gas pressure each time allowed to rise to 180 mm., before it is assumed that gas is not going to pass through the tubes at that test. The Rubin test should be repeated three or four times, preferably at monthly intervals, before one is justified in concluding that the tubes are actually closed. Intra-uterine injection of a radio-opaque substance is not used routinely; this procedure is reserved for patients who wish to consider surgical relief from occluded tubes; the chief value of hysterosalpingography is to demonstrate, by means of x-ray films, the exact site of tubal obstructions. Lipiodol and similar oily opaque media are not innocuous; sometimes they cause tubal inflammation and, if retained in the tubes, they initiate a foreign-body reaction.

Study of the Uterine Cervix.—The next step in diagnosis is a Hühner Test. This should be performed at the time of ovulation, i.e., 12 to 14 days before the expected onset of a menstrual period. The wife reports for examination several hours after coitus. If the husband's semen is normal, one should still find spermatozoa in the vaginal vault; but they will probably be immotile because spermatozoa are soon killed by the normal acid vaginal secretions. However, the presence

of spermatozoa in the posterior vaginal fornix conclusively proves that semen had been delivered into the upper vagina. Mucus is next aspirated from the cervical canal with a Luer syringe; it is thought that cervical mucus is most abundant at the time of ovulation, i.e., approximately midway between menstrual periods. In normal individuals the clear glairy endocervical mucus aspirated six to eight hours after intercourse, should contain approximately three to five actively motile spermatozoa per high power field.

Consequently, the Hühner test demonstrates that intercourse had been consummated normally, or that the husband has hypospadias or premature ejaculations, or that the wife suffers from vaginismus which results in prompt evacuation of semen from the vagina. It also demonstrates both the ability of spermatozoa to ascend into the cervical canal and the effect of endocervical secretions on the spermatozoa. Dead spermatozoa in the cervical canal are indicative of endocervical hostility; this usually results from an endocervicitis with a mucopurulent discharge that kills spermatozoa. Eradicating an endocervicitis is one of the simplest methods of improving fertility.

The Endocrine Survey.—After one has examined the wife's genital organs for gross abnormalities, determined the status of the husband's spermatogenesis, investigated the patency of the cervix, uterus and fallopian tubes, checked on the delivery of semen to the cervix and the reception accorded spermatozoa by endocervical mucus, the final diagnostic step is an endocrine survey. This is the least satisfactory phase of the problem, both from the standpoint of diagnosis and treatment. It is chiefly concerned with factors which control development of the uterus, function of the ovaries and response by the endometrium.

Healthy women of childbearing age who menstruate normally and with some degree of regularity, probably also ovulate fairly regularly. On the other hand, individuals without gross genital pathology, who either menstruate infrequently, or flow irregularly and scantily or who bleed continuously, probably do *not* ovulate—such menstrual disorders usually result from disturbed function by the glands of internal secretion.

There is no direct method of proving that a woman ovulates. We rely on presumptive evidence, namely, the histologic appearance of the endometrium at the onset of a menstrual period. Endometrial biopsies for this purpose are obtained with a suction curet, preferably within a few hours after the first show of menstrual blood. It is assumed that a woman has ovulated if her endometrium shows the normal effect of corpus luteum hormone stimulation. Such progesterone effects, known also as secretory or pregestational responses, are recognized by hypertrophy of stroma cells, corkscrew hypertrophy of the uterine glands and secretory swelling of their lining epithelial cells, but especially by the marked development of spiral arteries so that they extend into the compacta, or surface layer, of the endometrium.

Some women bleed fairly regularly from an endometrium which has undergone only the proliferative changes of estrogenic or follicular hormone stimulation. This phenomenon is called anovulatory menstruation. Others bleed more or less continuously; biopsies reveal hyperplasia of the endometrium and the ovaries are devoid of corpora lutea; such women are sterile. For women who fail to ovulate regularly, as well as for many others, additional diagnostic studies may be desirable, viz., x-ray films of the sella turcica, basal metabolic rates, blood cholesterol determinations and sugar tolerance tests. Few clinicians have access to laboratories equipped to make assays for the various hormones, and no one knows the practical value of such assays after they have been made. Consequently, they cannot be considered essential in the routine investigation of a barren marriage.

In addition to the foregoing physical conditions, it is probable that there are psychological factors which also contribute to barren marriages. As proof of this may I remind you that adoption of a child is sometimes followed rather promptly by a pregnancy, and this despite years of previous infertility.

Treatment

The diagnostic survey must be a painstaking search for every factor which might contribute to the barren marriage. The physician's next obligation is a systematic elimination of *each* and *every* contributing cause found in both the husband and his wife. He must not restrict treatment to a single major factor, while neglecting

the minor, more trivial causes. Due consideration to these apparently nonessential conditions may account for the success of some clinicians, where others fail. Furthermore, the husband cannot be absolved from responsibility until his semen is entirely normal and spermatozoa are found in the vaginal vault after coitus.

The leukorrheal discharge arising from an inflamed vagina may be so hostile to spermatozoa, that they are promptly killed before having an opportunity to reach the haven of friendly endocervical mucus. Many cases of vaginitis are instances of Trichomonas infestation. I have had more success with Floraquin insufflations and lactic acid douches in relieving this type of vaginitis, than with other methods of treatment.

The normal pH of the vagina varies from 4 to 4.5 and this degree of acidity is not favorable to longevity of spermatozoa. Some cases of infertility have been rectified by the simple expedient of an alkaline douche before intercourse. This insures a less hostile medium for spermatozoa in the vagina and is conducive to their longer life; thus they are given an opportunity to reach the cervix.

Vaginismus may result from psychic factors; often it is an aftermath of pain experienced during coitus. Painful intercourse may be caused by a rigid thick hymenal ring, by vaginitis, or by inflammation in the upper genital tract. Whatever its cause, vaginismus must be relieved—otherwise vaginal spasm will promptly evacuate all seminal fluid. Many patients are extremely grateful for a perineotomy which made intercourse a comfortable event.

Cervical stenosis can usually be overcome by office dilatations with graduated dilators; occasionally gas anesthetic is necessary. Scar tissue obstructions in the cervix should be dilated every three months until one is certain that the canal will remain adequately patent.

Chronic endocervicitis is characterized by a tenacious mucopurulent discharge that pours from the external os or plugs the canal. Furthermore, cervical polyps, nabothian cysts, cervical strictures and erosions on the pars vaginalis, are frequent aftermaths of an endocervicitis. All may also be contributing factors to infertility, either because they are the source of a discharge which is hostile to spermatozoa, or by obstructing the cervical canal they tend to perpetuate an endocervicitis. Strictures must be dilated and polyps should be removed but nabothian cysts are of importance when they encroach on the canal lumen. Cautery treatment is recommended for chronic endocervicitis, using nasal-tip cautery blades to make separated, linear burns that extend from the internal os to the external os and are placed in the four quadrants of the canal. Neither diathermy treatments with a cylindrical electrode nor conization of the canal have impressed me favorably. The cautery can also be used to destroy some erosions. Others require amputation, preferably by some modification of the Schroeder technique. However, the amputation must be at a low level; removal of too much cervix might result in subsequent miscarriage or premature labor.

After the cervix has either been cauterized or amputated, patients must be followed and examined regularly. These procedures are sometimes followed by cervical strictures, and it is essential that the patency of the canal be maintained.

If, at the time of ovulation, the cervical mucus is so scant that one is unable to obtain a specimen for examination—it probably also is insufficient to aid in the ascent of spermatozoa into the uterus. The midinterval administration of estrogens tends to increase the amount of mucus secreted by cervical glands.

Some gynecologists recommend repeated dilatations of the cervix to stimulate growth of a hypoplastic uterus; this is harmless therapy but we disapprove of intra-uterine stem pessaries; they are foreign bodies and predispose to infection. They may initiate an endocervicitis which acts as a contraceptive. There is no doubt that the administration of estrogens produces hypertrophy of the uterus but the hormone must be given frequently and in large doses. This is substitution therapy; it is not stimulating. Consequently the uterine enlargement is only temporary. On the other hand, administering large amounts of an estrogen to an infertile woman has a theoretic disadvantage; it may inhibit ovulation.

If the uterus is freely movable, a retroflexion can usually be overcome by manual replacement; an anterior position of the uterus is easily maintained by a suitable pessary.

The infertility of women with uterine fibroids is often dependent on associated pathology, not the fibroids themselves. Although the value of

myomectomy is recognized in selected cases, this operation is rarely an essential step in the management of a barren marriage.

If the history of a scanty menstruation, the size of the uterus and the histologic evidence obtained from an endometrial biopsy, suggest that the endometrium is poorly developed and not favorable to the successful implantation of a fertilized egg, it can be made to grow more luxuriantly by substitution hormone therapy. This is accomplished with estrogens to prime the endometrium during the first half of the menstrual cycle, followed by generous doses of progesterone to supplement the action of the patient's own corpus luteum.

When gas fails to pass through the fallopian tubes at three consecutive monthly Rubin tests, it is assumed that they are closed by firm adhesions; consequently further tests are considered superfluous. However, Rubin tests also have therapeutic value, as is attested by the large number of patients who become pregnant immediately after a tubal insufflation. Apparently moderate gas pressure sometimes straightens out tubal kinks and ruptures filmy adhesions.

If the patient with occluded tubes wishes to consider surgical relief, roentgenograms should be made after an intra-uterine injection of some watery radio-opaque substance. Such films determine the exact site of tubal obstructions. Those located at the fimbriated ends are most favorable for plastic operations designed to restore tubal patency. Obstructions near the uterus, or at the cornua, are almost hopeless.

After hysterosalpingography and the demonstration of a favorable type of obstruction, it is my practice to tell the couple that the likelihood of success from a plastic operation on the tubes, is not more than 15 or 20 per cent; that the operation will be undertaken if both the husband and his wife insist but I cannot urge it. No woman should be submitted to salpingostomy unless occluded tubes constitute the major cause for her barren marriage. Furthermore, one must be certain that the husband's semen is normal and that his genital tract is free from infection; it would be sad, indeed, if the operation were successful but the husband promptly reinfected his wife and her tubes were again sealed.

Irving Stein is enthusiastic about the surgical treatment of certain amenorrheic, sterile women who have large polycystic ovaries; he resects a generous portion of the ovarian cortex together with the follicular cysts. Few gynecologists share Stein's enthusiasm because polycystic ovaries are probably not the essential pathology responsible for the patients' symptoms. Furthermore, I never recommend ovarian resections except in cases of endometriosis. Scar tissue, adhesions and more follicular cysts are almost inevitable after the surgical trauma of resecting ovaries.

Pelvic endometriosis that produces symptoms is an indication for operation. I urge surgery for younger women whose chief complaint is sterility, not only to increase the likelihood of pregnancy but also to conserve their ovaries. The usual procedure in such patients is (1) excision of available endometriotic nodules from peritoneal surfaces; (2) resection of chocolate cysts and other areas of endometriosis from the ovaries, provided at least 50 per cent of the original healthy ovarian tissue can be spared, and (3) replacement of the uterus into an anterior position. The technique originated by the Chairman of our Department, Dr. Arthur H. Curtis, is recommended for the surgical correction of retrodisplacement; it consists of three steps, (a) suturing together the uterosacral ligaments, (b) a Baldy-Webster type of round ligament shortening, and (c) advancement of the bladder reflection of peritoneum to its normal location on the fundus. Conservative operations for endometriosis are worth while; not a few of my patients, who were previously infertile, become pregnant after submitting to these surgical procedures.

The treatment of ovaries which fail to ovulate is highly unsatisfactory. Disturbances in ovarian function may result either from primary ovarian failure or from malfunction by the anterior lobe of the pituitary gland. There is great need for potent gonadotropic hormones in the treatment of women with sluggish, poorly developed, nonovulating ovaries. Thus far the pituitary preparations have proven almost worthless. Early communications predicted that pregnant mare's serum hormone, such as Gonadogen, would stimulate the normal development of Graafian follicles, produce ovulation and exercise a luteinizing effect on the ruptured follicle. At present these far-reaching claims for the equine gonadotrope are seriously doubted. Apparently it only rarely produces ovulation in human ovaries.

I cannot recommend small, so-called stimulating doses of x-ray over the pituitary and ovaries

as wise treatment for this group of patients. Several observers report great success, i.e., many pregnancies after such x-ray therapy, but I am afraid of it. X-rays are essentially destructive and there is reason to doubt that they ever exert a stimulating effect on normal tissues. Experience has shown that the dose of x-rays, which temporarily inhibits ovarian function in one patient may produce permanent atrophy of ovaries in another.

General hygienic measures are extremely valuable adjuncts in therapy. By improving general health they tend, also, to improve gonadal function. Dessicated thyroid is used frequently, in fact, whenever permissable; and many of these patients are hypothyroid. Thyroid is unquestionably our most effective hormone in the relief of infertility and most of the other hormone therapy in infertility is based on wishful thinking rather than sound reasoning. Foci of infection should be eradicated. A high-protein, low-carbohydrate diet and thyroid, are indicated for women who are overweight. Forced feedings, iron and a high vitamin intake are advisable for frail anemic undernourished individuals who are underweight. Regularity in habits, an adequate amount of sleep, avoidance of mental and physical fatigue, out-of-door exercise, and long vacations alone, are all beneficial. Vitamin D therapy is helpful but vitamin E has only questionable value. Those interested in animal husbandry are convinced that vitamin C deficiencies contribute to low fertility in domestic animals; probably this is also true for man.

Laymen have learned that women are most fertile midway in their menstrual cycles, i.e., that they are most likely to ovulate and hence to become pregnant, 12 to 14 days before the expected onset of a menstrual period. However, this knowledge has certain disadvantages. Most women do not menstruate regularly, consequently the date of ovulation cannot be accurately predicted. Many men produce semen of the best quality when they have coitus infrequently, possibly once a week or three times a fortnight. Some couples are so intent on pregnancy that they have intercourse each night during the week which they think will include the fertile period. Thus they may create a state of relative male sterility at the time the wife is actually most fertile.

It would be remiss not to mention artificial insemination. Neither the laity nor the profession seems to appreciate the many ramifications of this term. A wife may be inseminated either with her husband's semen or with semen from a donor. Furthermore, semen may be placed in the upper vagina on the cervix, or it may be injected into the uterus. Using the husband's semen and placing it on the cervix is indicated when physical deformities or psychic disturbances prevent the completion of normal coitus. Injecting semen into the uterus is potentially dangerous; it may cause an upper genital infection. However, intra-uterine insemination with the husband's semen might be countenanced if cervical hostility to spermatozoa could not be treated satisfactorily. I have refused to inseminate women with donor semen; the moral, social and legal aspects of donor insemination make it highly objectionable to me.

Conclusions

1. "Barren marriage" is a more appropriate term than female sterility, for the problem presented by a wife who has failed to become pregnant.

2. Either the husband or the wife may be responsible; usually both are partially at fault and both must be examined thoroughly.

3. An adequate survey of such cases must be concerned with (a) the wife's general physical condition; (b) the status of her genital organs; (c) spermatogenesis; (d) delivery of semen to the cervix; (e) ascent of spermatozoa into the uterus; (f) patency of the fallopian tubes; (g) ovulation, and (h) the ability of the endometrium to receive and nourish a fertilized egg.

4. All practitioners must be able to recognize deficiencies in seminal fluid; husband's should be referred to a urologist if their semen is not absolutely normal.

5. Most barren marriages result from a multiplicity of factors; all must be systematically eliminated.

6. One is likely to fail in the management of barren marriages unless he receives wholehearted coöperation both from the husband and the wife; both must submit to the entire diagnostic study and both should follow through with all indicated treatment for at least one year; only then should they turn to adoption as the solution for their problem.

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MSMS

Maternity Hospitals and Homes*

Facilities and Practices in Licensed Maternity Hospitals and Maternity Homes in Michigan

By The Committee On Maternal Health
Michigan State Medical Society
1938-1939

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There probably never has been a time in American history when there has been so much concern over the importance of preserving maternal and infant life, and decreasing maternal and infant morbidity, as at the present.

The increasing number of women who are being hospitalized for maternity care suggests that inquiries be made concerning the facilities which are being provided in hospitals and maternity homes to safeguard both the mother and the newborn.

The changes in the economic status of the people, the dislocation of family life resulting from national preparedness, and the possibility of actual war, influence the type of maternity care given throughout the entire nation.

There will be a marked increase in hospital obstetrics under some circumstances and a slight decrease in others.

While there is a great anxiety over maternal mortality, greater attention must be paid to maternal morbidity. The immediate repair of parturitional injuries is one of the great obstetric problems; and the solution will depend to a great extent on the facilities furnished in the delivery room, whether it be in the home or in the hospital.

A further vital objective is better care for the newborn, and especially of the premature infant during the first few days and weeks of life.

Births in hospitals have increased steadily during the last fifteen or twenty years, until, at the present time, more than a million deliveries, or over 50 per cent, of the entire births in the United States are conducted in hospitals and in maternity homes.

The question arises, have the hospitals been able to become equipped and organized to adequately meet the increasing demand for modern obstetric and newborn service?

Are the maternity case and her newborn definitely safeguarded by hospitalization as compared to domiciliary delivery?

Four years ago the Committee on Maternal Health of the Michigan State Medical Society made a survey of obstetric practice in the State; in this work the Committee was assisted by the United States Public Health Service. Over twenty thousand carefully prepared blanks were submitted to approximately three thousand physicians who, at that time, were doing obstetric practice in Michigan. In response over ten thousand blanks were filled out, and returned to the Committee for study.

Among the many interesting items of information which this study revealed was that approximately 50 per cent of the births in Michigan occurred in hospitals.

The Committee, realizing that many of these hospitals were small and that their facilities for modern maternity service must necessarily be limited, felt that it would be of interest to pursue this phase of maternal care by an investigation

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From the Committee on Maternal Health, Michigan State Medical Society, 1938-1939.

of the facilities in all licensed institutions that render maternal and newborn service in the State.

Study blanks were prepared by the State Committee on Maternal Health, and the task of submitting them to each hospital and home and having them filled out was performed by Miss Elizabeth N. Robinson, Hospital Supervisor of the State Department of Social Welfare.

This study was commenced late in 1938, but by reason of insufficient clerical assistance in the State Social Welfare Department, the information received was not available for study until the autumn of 1940.

A short verbal report of this research was presented to the House of Delegates of the State Medical Society at its annual meeting last September.

By legislative enactment the State Department of Social Welfare at Lansing has the responsibility of inspecting, licensing, and supervising all hospitals and homes where maternity care is given for pay.

Each institution is given a new license once a year, presumably after proper inspection.

Information was obtained from two hundred and eight hospitals and sixty-eight maternity homes, a total of two hundred and seventy-six.

Since this study began seventeen more hospitals and five more homes in the State have been granted licenses for maternity care, making a total of two hundred and ninety-eight, to date (September, 1941).

Information concerning facilities and practices in licensed maternity hospitals covered the following subjects:

1. The Medical Staff
2. Type of physicians using hospitals
3. Number of resident physicians
4. Number of interns
5. Labor rooms
6. Delivery rooms
7. Facilities for sterilization
8. Use of sterile gloves and gown
9. Analgesia and anesthesia
10. Pituitrin
11. Rules for consultation
12. Blood transfusion
13. Length of stay in hospitals
14. Number of nurseries
15. Isolation nursery
16. Resuscitation
17. Prematures
18. Incubators

Information concerning facilities and practices in maternity homes was obtained on the following subjects:

1. Persons operating maternity homes
2. Years of experience of nurse
3. Education
4. Age
5. Type of practitioners using homes
6. Sterilization of supplies
7. Type of delivery table
8. Availability of ergot and other drugs
9. Nursery

The original paper on this subject occupied seventeen typewritten pages and contained twenty-eight tables giving statistical data concerning the above listed subjects. Space would not permit the entire publication of such details.

The conclusions drawn from this study are summarized by the following comments:

Comments

There is great need for better medical obstetric organization and especially in the smaller hospitals.

Each hospital should have as head of the obstetrical department a physician who should be responsible, in fact as well as in theory, for all the activities pertaining to hospital maternal care.

The rules for consultation should include all complications which may in any way seriously affect the mother or child.

There is a lack of interns in many of the hospitals.

Better equipment is needed in many of the smaller hospitals and maternity homes; the requirements of the State Department of Social Welfare should be more closely followed.

There is need for more isolation nurseries.

Better facilities for the care of premature infants are needed, such as heated beds and efficient and economical incubators.

There is a great dearth of nurses who are specially trained in the care of prematures.

Pediatric consultation should be utilized more generally whenever it is available.

With the increasing number of maternity cases which are being hospitalized, better facilities, better obstetric practice, and better nursing care present a serious and urgent problem to hospital administrators and to the physicians who render the obstetric service.

This study reveals that maternal mortality

among patients hospitalized is definitely lower than the general maternal mortality in the State.

A comparison of the maternal mortality in the hospitals with the greatest number of births per year with those of smaller hospitals shows no significant difference. It is assumed, however, that this is partly due to the fact that in maternity homes and in the smaller hospitals the apparently normal cases are received, while the seriously complicated cases are naturally taken to the larger and better equipped hospitals.

The committee is concerned about the status of maternity homes in the state and it believes that, in addition to the present requirements of the state department of social welfare, before a new license is granted to such institutions, the licensee should be a graduate and registered nurse, in good health, and that such a trained individual should be on duty at all times, when patients are present in the maternity home.

The committee also believes that in all maternity homes an approved autoclave, or pressure cooker for sterilization of dressings and other supplies should form a part of the regular equipment.

It also believes that in addition to ergotrate and other preparations for the control of hemorrhage a sterile uterine pack, with proper instruments for immediate use, should be ready at all times.

In over one half of the states in the union the licensing and supervision of maternity hospitals and homes is a function of the state department of health.

The committee believes that this plan should be very seriously considered in Michigan and suggests that the house of delegates of the Michigan State Medical Society study it, anticipating an act placing this responsibility in the department of health.

The committee believes that under the supervision of the health department facilities and practices in maternity hospitals and homes could be very much improved in Michigan.

The Committee appreciates the coöperative efforts of the State Department of Social Welfare in making this report possible and is especially grateful to Miss Elizabeth N. Robinson, who assumed the responsibility of distributing, collecting, and returning the questionnaires to the Committee for study.

Hemorrhagic Disease of the Newborn*

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The new interest aroused in this subject by the discovery of Vitamin K as essential for the production of prothrombin makes it seem wise to review the facts in order not to be led astray by premature conclusions.

First, it is necessary to define Hemorrhagic Disease of the Newborn so that we may know what is to be included in any statistical review. If petechial hemorrhage into the skin and mucous membranes, microscopic blood in the urine, minimal bleeding from the navel, coffee-ground vomitus in the first day of life, and cephalhematoma among many other benign symptoms are to be considered manifestations of hemorrhagic disease, the incidence will be very high. But if we should include only those cases which have a definitely prolonged coagulation time or bleeding time as proposed by some, the incidence will be very low.

Only a small number of the cases reported as cured can rightfully be accredited to the treatment employed if the list includes the usual cases of mild bleeding which tend to recover spontaneously. Are we justified in using the term Hypoprothrombinemia of the Newborn as synonymous with Hemorrhagic Disease of the Newborn?

If we review the factors concerned in the coagulation of the blood, we can see that there are many besides Prothrombin and Vitamin K to be considered. The case for hypoprothrombinemia is a strong one but there remain several questions to be satisfactorily answered before there can be complete acceptance of this as the chief, much less the only cause of Hemorrhagic Disease of the Newborn.

■ The renewed interest in hemorrhagic disease of the newborn manifested in the past three or four years is chiefly due to the reports of experimental and clinical studies of the prothrombin content of the blood during the neonatal period and the effect upon these prothrombin values which results from the administration of Vitamin K either to the mother before the birth of the child or to the infant after its birth.

The exact etiology of this condition has always been obscure. We are anxious to know whether we have, at last, got the answer or not.

When a new fact is discovered there is always the danger of overestimating its significance. The enthusiasm of most of the investigators of

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the subject here under consideration is proof of this. On the other hand there are always some whose reaction is one of determined resistance, an unwillingness to follow the crowd. Sound progress needs both the enthusiastic and the resistant, and also there must in the end be a judge who can view the problem objectively and state the case. The object of this paper is to state the case.

Now, first of all we must know what we are talking about when we say "hemorrhagic disease of the newborn." Von Reuss says:

"In contradistinction to hemorrhagic diseases of later life which tend toward permanency, i.e., a hemorrhagic diathesis, the hemorrhagic disease of the newborn does not have the nature of an inherited individual idiosyncrasy in the child affected, but rather, of a transitory condition that is based on peculiarities of the newborn period itself, and, in case it is overcome, will not recur."

In the last edition of Holt and McIntosh we find this opening statement:

"A tendency to bleed spontaneously may appear within the first three or four days after birth, persist for a few days and then disappear. Hemorrhages at this time though often inconsequential, are sometimes extensive; they may produce serious damage of internal organs, especially of the brain, and cause death from shock or exsanguination. A sharp distinction cannot be drawn between this so-called hemorrhagic disease of the newborn and accidental hemorrhages caused by birth trauma, for in many instances trauma would cause no significant bleeding were it not for the underlying hemorrhagic tendency."

Quoting further from the same source we find the following:

"The incidence of hemorrhagic disease depends upon the definition accepted. Obvious bleeding unrelated to birth trauma is relatively infrequent, being reported in 0.1 to 0.5 per cent of all births. If cases of frank cerebral hemorrhage are included in which trauma may be presumed to have played a part, the incidence is somewhat greater, and finally if one includes infants with retinal hemorrhages or with red cells in the spinal fluid the incidence is between 30 and 50 per cent of all deliveries. It is now clear that a latent hemorrhagic tendency is present in all newborn infants and that hemorrhage will develop in the presence of minimal trauma."

Clifford including all spontaneous external hemorrhages, internal hemorrhages of the gastro-intestinal tract and hemorrhages into the cranial cavity not of traumatic origin got figures of 1 in 118 and 1 in 333 births. Sanford would prefer to include only those in which definite deviation from normal coagulation of the blood can be shown. In such a classification the number would be very small, 1 in 2500 births in his material. Fanconi would classify hemorrhagic disease under two headings, (1) Visible forms such as Melena and hematemesis, umbilical hemorrhage, cephalhematoma, hemorrhage from the genito-urinary tract, cutaneous and subcutaneous hemorrhages, pulmonary hemorrhage. (2) Invisible forms such as intracranial hemorrhage, hemorrhage of the liver, the adrenals, et cetera.

In the enthusiasm that has resulted from the widespread use of Vitamin K in the treatment of hemorrhagic conditions in the newborn it is obvious that there is a considerable amount of confusion about what constitutes hemorrhagic disease. When we read the articles we find, for example, petechial hemorrhages in the palate, petechia on the forehead and scalp, red blood cells in the cerebrospinal fluid, red blood cells in the urine, hematoma of the sternomastoid muscle, hemorrhage of the bulbar conjunctiva, retinal hemorrhages and vaginal hemorrhage all referred to as manifestations of hemorrhagic disease of the newborn. Is there justification for designating any of these as signs of a hemorrhagic disease? How can they be shown to be the result of a defect in the mechanism of coagulation? Is cephalhematoma due to a disturbance of coagulation or is it purely traumatic, or is there some other factor such as a deficiency of Vitamin C? Has intracranial hemorrhage been shown to be definitely due to a defect of coagulation, or frequently enough to be classified among the manifestations of hemorrhagic disease of the newborn? Many questions like these need to be clarified before we can be sure we are all talking about the same thing when we refer to hemorrhagic disease of the newborn.

The incidence of hemorrhagic disease of the newborn thus depends largely upon the definition used in the particular clinic or maternity nursery from which the report is made. The value of the treatment recommended will likewise have to be judged by the type of case treated. Only a very small number of the cases reported as cured can rightfully be accredited to the treatment employed if the list includes the usual cases of mild bleeding which tend to recover spontaneously anyway.

Petechial hemorrhages on the face, scalp, neck and palate in infants born with cephalic presentations, as well as those found on the buttocks or leg in infants born with breech or footling presentations can hardly be said to be due to hypoprothrombinemia because they are present immediately after birth at a time when the prothrombin values are high. The same can be said of subconjunctival hemorrhages. Intracranial hemorrhages often manifest their presence in the first twenty-four hours after birth and these can surely not be included in the list of hemorrhagic diseases. Where shall we draw the line? Which of the intracranial hemorrhages shall we include and which shall we exclude? Can we rightfully say that those cases of intracranial hemorrhage which exhibited their first symptoms in the second or third day are due to hypoprothrombinemia just because the prothrombin level happens to be low at that time? Cephalhematoma has quite frequently been spoken of as a manifestation of hemorrhagic disease of the newborn in this recent enthusiasm over hypoprothrombinemia but both Clifford's and Sanford's statistics show this condition to occur with equal frequency among infants whose mothers had received Vitamin K and those whose mothers had not. One author even includes hematoma of the sternomastoid in his statistical report. As far as I know there is as yet no proof that this condition is in reality due to a hemorrhage into the muscles and furthermore it is almost never recognizable until the second and more commonly not until the third week of life. "Coffee-ground" vomitus has also frequently been included as a symptom of hemorrhagic disease. A rather large percentage of newborn infants vomit a "coffee ground" material in the first day or two of life, it is seldom associated with any other manifestations of hemorrhage and usually subsides spontaneously within less than twenty-four hours. It is more likely the result of the effect on the gastric mucosa of congestion and stasis plus the trauma of violent stomach contractions, than due to a pathologic bleeding tendency.

Classification

The classification of diseases on the basis of etiology whenever possible is always preferred. Can we today truthfully give this disease a name which implies a known etiology. One author proposes the name Hypoprothrombinemia Hemorrhagica Neonatorum. Another uses as the title of his paper: "Treatment of Hypoprothrombinemia (Hemorrhagic Disease) of the Newborn Infant." It would be very nice to be able to speak with such assurance but there is not yet complete agreement that we have gotten that far. Let us review the facts that may have a bearing on the etiology and try to evaluate them fairly.

There is known to be an increase in the coagulation and bleeding times during the first days of life which reaches its maximum by the third day and returns to the birth values by the sixth day. At birth the coagulation and bleeding times are three and two minutes, respectively; they increase to five and four minutes respectively by the third day. It has been shown that all the elements concerned in coagulation tend to diminish during the first few days of life, prothrombin, platelet disintegration (liberation of thromboplastin), fibrinogen, and calcium. Coagulation is the result of the soluble blood protein fibrinogen being changed to the insoluble fibrin by means of the substance thrombin which in turn is composed of thromboplastin and prothrombin, for which reaction calcium salts are necessary. Of these elements we can dismiss calcium since a level of this substance in the blood low enough to affect coagulation is incompatible with life, the same can be said of fibrinogen which comes largely from the bone marrow and is only seriously reduced in very rare severe disease of the bones. Thus, there remain two elements for consideration, thromboplastin (thrombokinase, cephalin) and prothrombin. In regard to thromboplastin, there has been evidence presented that the resistance of platelets to disintegration is increased in the first few days of life and that there is an exaggeration of this resistance in infants with actual hemorrhagic disease.

Now what about prothrombin? This necessary element in coagulation is formed in the liver, and the fat soluble Vitamin K is necessary for its production. Vitamin K is present in certain foods and is also synthesized by bacteria in the gastro-intestinal canal. By the use of newer methods for estimating the amount of available prothrombin in the plasma it has been shown by many observers that there occurs regularly in all newborn infants a sharp fall in the first days

of life. The figures for the level of prothrombin in the cord blood approximate pretty closely those for the mother's plasma. There is a sharp decrease in the first two days, usually still further decrease in the third day, and then there is a steady and rapid rise, reaching close to cord blood levels by the sixth day. That this marked decrease in serum prothrombin is due to a deficiency of Vitamin K has been amply proven. The administration of the natural Vitamin K concentrate and the synthetic Vitamin K to the mother before or during labor, and also the administration of the vitamin to the infant after its birth will regularly prevent this decrease in available prothrombin as estimated by the prothrombin clotting time tests.

The only thing that will prevent this reaction to the use of Vitamin K is a disturbance of liver function sufficient to interfere with prothrombin synthesis. The decrease in prothrombin in the early days of the newborn period is usually due then to K avitaminosis, which in turn is due to the fact that the intestinal tract contains no bacteria at first and there is an insignificant food intake, a few days are thus required for sufficient Vitamin K to be produced.

Having now presented the factors that have to do with coagulation there remain two other factors that should at least be kept in mind in our judgment of hemorrhagic disease. Vitamin C has been shown to be relatively low in many newborns and quite regularly at a very low level in cases of intracranial hemorrhage in which it has been tested. This vitamin has to do with the tensile and cohesive properties of connective tissue and is in some way concerned in vascular wall integrity. Should not this factor be considered in intracranial hemorrhage and in cephalhematoma and perhaps in some other hemorrhagic manifestations? Also the matter of capillary permeability in general might explain some of the bleeding tendencies seen in the newborn and should not be too lightly dismissed. Asphyxia was noted by Clifford to have occurred in a significantly large number of the cases of hemorrhagic disease reported by him. Asphyxia together with stasis and congestion are given by Von Reuss as potent factors in the etiology of intracranial bleeding when associated with trauma.

The case for hypoprothrombinemia is indeed a strong one but there remain several questions to be explained before there can be complete acceptance of this as the chief, much less the only cause of hemorrhagic disease of the newborn. Sanford could find no difference in the incidence of hemorrhagic disease in his series of cases given Vitamin K as compared to an untreated group. Not all newborns even with extremely low prothrombin levels show signs of hemorrhage. When such low levels are found in obstructive jaundice in adults they always bleed. The statement is made in Holt and McIntosh that a latent tendency to hemorrhage is present in all newborns and that hemorrhage will develop in the presence of minimal trauma. Why then do they not all bleed for they all certainly have much more than minimal trauma and why also do so many of those who actually do have hemorrhagic disease start to bleed in the very first day of life while their prothrombin is still at a comparatively high level?

Hemorrhagic diseases of the newborn will in the vast majority of cases subside spontaneously. Are we justified in assuming that Vitamin K administration has been responsible for all the cures reported where it has been used?

At least it can be said that prothrombin deficiency in itself is not sufficient to produce hemorrhagic disease, there are other roots to this evil not yet discovered. Fanconi makes this statement: "Vitamin K is only one of many factors responsible for normal blood coagulation, and cannot be assumed to be at fault in every hemorrhagic disturbance. In specific cases it is not always possible to adequately explain the causes of the hemorrhagic tendency, in fact I believe that in most of the severe hemorrhagic catastrophies several causes are combined in their occurrence." Within the past nine months we have had two cases of severe melena at Cook County Hospital which were illustrative of the truth of this statement. In each case bleeding started during the third day of life. The prothrombin time in one was 180 seconds and even longer in the other. In each instance the prothrombin time came back to normal very promptly after the administration of Vitamin K but the bleeding continued unabated even with normal prothrombin values. In both cases a transfusion of whole blood was finally given after which the bleeding stopped promptly.

In conclusion, it is well to be constantly reminded that in the transition from intra-uterine

to extrauterine life the newly born has many physiologic and anatomic adjustments to make. In making these adjustments many complicated processes are involved about which we still have very little information. His success or failure in this adaptation will be determined by many factors, some have to do with his state of maturity at the time of his birth, some to his inherent vitality and others to damage that may have been inflicted by the very processes of birth. Hemorrhagic disease like many other peculiarities of the newborn is probably due to a combination of several of these difficulties of physiologic adjustment.

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MSMS

The Office of War Information has decided that the Annual Reports of the Surgeon General of the United States Public Health Service will be discontinued for the duration of the war.

* * *

It takes longer to train a Doctor of Medicine than it takes to build the most elaborate battleship. Much thought should go into this training and building, that both may be sturdy, and by all means adequate. Standards must not be lessened. Those whose training is now starting are for the postwar period, not for the present emergency, and there is no excuse to neglect, or to reduce standards.

Diarrhea of the Newborn

Epidemiological Aspects and Methods of Control*

By Franklin H. Top, M.D.
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■ In the Michigan Regulations for the Control of Communicable Diseases, "epidemic diarrhea of the newborn" is not defined but is stated to be reportable, and the circumstances surrounding the development of an outbreak must be investigated by a local full-time health department or the Michigan Department of Health. Furthermore, the health department must take such measures as are deemed necessary to control the infection. Epidemic diarrhea of the newborn, as described by Rice and his associates[2,5,14,15,16,29] is a disease which is definitely epidemic in character, of unknown etiology, and highly fatal. Reports of similar outbreaks have followed. However, all reported outbreaks and some not recorded, including our own experience, have not been of the severe form. Inquiry has shown that many recent unreported outbreaks have been rather mild in character, particularly those of unknown etiology. Strictly speaking, the term "epidemic diarrhea of the newborn," probably should be limited to outbreaks similar to the group described by Rice et al.,[2,5,14,15,16,29] but some outbreaks of diarrhea of the newborn of known etiology are infectious, and measures must be taken to control the outbreak. Outbreaks of diarrhea due to enteric organisms such as B. dysenteriae can spread as readily and be as fatal as so-called epidemic diarrhea of the newborn. Though a matter of opinion, we feel that all outbreaks of diarrhea in infants under the age of one month occurring in institutions should be considered as diarrhea of the newborn irrespective of the etiological agent or lack of one. The factor of spread or epidemicity should be the determining factor, and if so considered, would leave no room for non-reporting on the part of attending physician or hospital management. It is exceedingly important that all diarrheas occurring in infants in lying-in institutions

*Presented before the meeting of the Michigan State Medical Society, September 25, 1942, Grand Rapids, Michigan.

should be readily distinguished so that an impending outbreak may be aborted. The following types of diarrhea do not demand control measures:

1. Diarrhea due to faulty nutrition.
2. Transient diarrhea produced by a mother's ingestion of an intestinal irritant or fresh fruit. This type occurs only among breast-fed infants.
3. Parenteral diarrhea following primary infections or sepsis which by toxins or bacterial products cause irritation of the gastrointestinal canal with resulting diarrhea.
4. Diarrhea following marked temperature changes, the condition lasting rarely more than one to two days, resulting in no secondary cases.

Other rarer conditions could be listed but in general are infrequently noted. Diarrheas demanding control and for which preventive measures are feasible are those epidemic in character of known or unknown etiology.

Etiology

Epidemic diarrhea of the newborn is a relatively newly described entity, outbreaks of which have appeared in the literature principally since 1935. The greatest number of outbreaks have been described by Rice and his associates.[2,5,14,15,16,29] They record twenty-seven outbreaks in lying-in institutions in New York City between July, 1934, and July, 1937. Prior to their report relatively little is recorded in the literature,[4,28] and since there have been a number of outbreaks added.[11,12,13,18,22,23,25,26,30] Nearly all outbreaks were alike in that no etiological agent was identified as being reasonably certain of having caused the infection. Extensive bacteriological and virological studies were carried out without success, and to date, with the methods now at hand, no etiological agent common to a majority of the outbreaks has been discovered.

In some outbreaks one or more organisms were predominantly present in stools, but in some instances even the authors question their etiological role; thus, B. dysenteriæ Flexner was found by Aitoff;[1] B. mucosus capsulatus and anhemolytic streptococcus by Jampolis et al.;[20] B. dispar by Johnson and Kaake;[21] B. coli mutabile by Baker[3] and by Dulaney and Michelson;[9] Monilia by Durand[10] and by Murphy and Mallozzi;[28] B. coli, P. pycocyaneus, S. viridans and others by Craig;[7] Salmonella (unclassified) by McKinlay;[27] B. lactus aerogenes by Cass;[6] and P. vulgaris by Costello and Lind.[8] It is possible that the organisms mentioned above were the cause of the outbreaks cited but in some instances at least even the authors felt it was not likely; that they served as possible secondary invaders appears to be more plausible. The picture is further confused by the fact that some organisms considered as causative agents of outbreaks are or can be normal inhabitants of the intestinal canal of newborn infants. Furthermore, the variability of intestinal flora during the first few weeks of life,[19,32] influenced by whether the infant is artificially or breast-fed[17] and the continual change in the nasopharyngeal flora[24] makes it difficult to determine a causative organism even though one or more may be consistently found in the stools of affected infants.

Snyder,[31] working in Soule's laboratory at the University of Michigan, under a grant from the Children's Fund of Michigan, has investigated a number of outbreaks which have occurred in newborn nurseries in the city of Detroit. He was able to isolate from one outbreak only four strains of organisms having cultural reactions of the paratyphoid or Salmonella group from over 100 fecal specimens, obtained equally from sick and well babies. This experience has been corroborated in subsequent investigations in which he has approached the problem from the possibility that members of the coliform group might be responsible. Colon bacilli are normal to every stool shortly after the birth of a newborn infant. Using serological methods and preparing specific anti-sera in rabbits against selected strains of coliform organisms isolated from babies with diarrhea, he was able to demonstrate in two outbreaks homogeneous antigenic groups, not related to one another. The organisms were encountered more frequently in stools of the sick than in stools from normal infants. The colon strains in question disappeared with the epidemic. Strains isolated after the epidemic had subsided as well as those obtained from another hospital, where no outbreak had occurred, were not agglutinated. Conversely, sera prepared against strains from normal babies and those isolated from personnel in the nurseries agglutinated only the homologous strains used in the immunization. As Snyder states, although these results cannot be accepted in any manner as proof of a causal relationship, they are highly suggestive and warrant further investigation.

Epidemiology

The epidemic diarrhea of the newborn described by Rice and his associates and the milder form recently encountered have epidemiological features which in the main are similar except that the former is far more fatal (average fatality rate 50 per cent).

Geographic Distribution

Outbreaks have occurred in lying-in hospitals in widely scattered parts of the United States, as well as in Canada, England, and France. The infection has been most commonly noted in the temperate zone. With respect to season, Rice et al.[2,5,14,15,16,29] found that they were rather evenly distributed as regards spring, summer, autumn, and winter, where fall and winter were grouped together and spring and summer also. There was a slight increase noted in the spring and summer period, but the difference was not significant.

Age, Sex and Color

By a generally accepted definition, diarrhea of the newborn is limited to infants under one month of age. State regulations recognize three or four weeks of age as the period during which infection so designated must be reported. Oddly enough, the condition is found only in infants of this age, rarely among older infants in the same nursery, is not spread to older infants on a pediatric floor to which an infected newborn infant has been admitted or among adults who care for such infants. Sex and color do not appear to affect the occurrence of the infection.

Economic Status

Economic status does not seem to play a role, although some authors have commented on the greater frequency of this condition among the lower economic groups. Our experience does not corroborate this. There is no reason to believe that economic status per se has any effect, and it is likely that the occurrence is dependent upon the kind of hospital involved and the type of service rendered. The author has seen as many cases among the middle and upper classes as among the lower, considering their respective proportions in the population. Furthermore, outbreaks have occurred in hospitals for the well-to-do as frequently as in charity hospitals and those which serve the lower economic groups. Actually, no matter how good the physical equipment or the availability of adequately trained personnel, an outbreak of epidemic diarrhea of the newborn may occur. There is a word of caution indicated because of the present emergency. With increasing difficulty in obtaining adequately trained personnel, with an increase in the birth rate, and with an ever-increasing proportion of hospital-born infants, opportunity for outbreaks is materially enhanced. In spite of adequately trained personnel and satisfactory procedures, overcrowding of nurseries causes a break-down in the proper conduct of the service.

Immunity

Newborn infants have little or no protection against diarrhea. Exposure to a known case in the same nursery is likely to involve the majority of the remaining infants in that nursery. There appears to be a difference in the reaction of normal infants as against so-called weaklings, prematures, and infants who have experienced a long labor on the part of the mother. The latter are more likely to develop the condition early and generally appear more critically ill. Usually they are the first to contract the disease, but in some outbreaks the infection has been so severe that the difference was not apparent.

Feeding

Whether an infant is breast-fed or artificially-fed does not affect the occurrence of the disease. It has developed as frequently among the former as among the latter.

Contributing Factors

Undoubtedly numerous factors play a part in the causation, maintenance, and persistence of the infection. The physical appointments of the hospital, the location and size of the nursery, ventilation of the nursery, facilities for scrubbing of hands, sterilization of equipment, the method of preparing formulas, understaffed nursing personnel, and overcrowding, among others, are likely determining factors.

Mode of Spread

An outbreak may begin explosively but generally many infants are not affected until an interval of two to five days have elapsed following the occurrence of diarrhea in one or two infants. Thereafter, a few or many infants may be suddenly afflicted, and unless definite measures

are taken immediately the majority may be affected. If the nursery is not placed under quarantine, if affected infants are not placed in isolation in a separate room, and if newborn infants are admitted to the contaminated nursery, new cases will continue to occur from time to time. In the mild type of infection there may be a period of one to three weeks without the occurrence of a new case, and then with a relatively new group of infants a case may again occur followed by numerous cases within a week. This state of affairs has occurred where control measures have not immediately been instituted or where they have been carried out half-heartedly. Because the etiological agent of epidemic diarrhea has not been discovered, it is rather difficult to dogmatically state the mode of infection. The infection is probably spread from infant to infant by proximity, perhaps air-borne, or from infant to infant through an intermediary. Where an enteric organism is involved, infection occurs by hand passage or through contamination of food or water. Felsen and Wolarsky[11] believe that infection comes about by "mouth to mouth" (infants) instead of "intestine to mouth."

Control

It is obvious that to control any disease one must be able to recognize the condition. All cases of diarrhea should be reported to a designated staff physician, whose duty it should be to pass upon the cause. He should be of an inquiring, suspicious turn of mind and should consider all doubtful cases as of the epidemic type until otherwise proved. If several cases appear simultaneously or within a few days of one another, the local department of health should be consulted. Both the severe and milder types of diarrhea of the newborn demand the same procedures, with few exceptions. Minimum requirements for the control of an outbreak are as follows:

1. A physician designated by the hospital, preferably a pediatrician, and a health department representative should work together.
2. The regular nursery should be closed to admissions; sick infants should be isolated in the isolation nursery or a new room set aside for the purpose, and in the case of a mild outbreak a new nursery should be set up for subsequent new births. In the severe type of epidemic diarrhea the obstetrical service should be closed and not reopened until all nurseries affected have been evacuated and cleaned. To procrastinate is to increase the number of cases and deaths.
3. Nursery personnel should not be interchangeable between nurseries.
4. Infants from affected nurseries, both cases and contacts, should not be taken out to mothers.
5. Treatment of affected infants and observation of well but exposed infants should be under the supervision of the designated physician.
6. The designated physician should make a daily check of temperature, weight, and number and character of stools on both ill and exposed well infants.
7. Clinical records of last month's births and current newborn record charts should be checked for missed cases.
8. The department of health and the hospital should arrange for the follow-up of recently dismissed infants and those dismissed following a reasonable period of observation.
9. Mothers should be interrogated concerning illness prior to the outbreak, and professional and service personnel should also be questioned.
10. When laboratory facilities are available, an attempt should be made to determine the etiological agent by culturing the nasopharynx and stools of sick and well babies and professional and service personnel.
11. Formula room equipment and techniques should be examined and milk and water supplies should be carefully inspected.
12. A careful check should be made of sanitary facilities and improvements made where indicated.

Prevention

During the past and even at present, when obstetrical facilities are considered for new hospitals, more effort, money and time are expended on comforts for mothers than on essential needs of the newborn. Infants are usually housed in poorly ventilated, overcrowded quarters, having inadequate facilities for the scrubbing of hands and disposal of diapers and wastes. Basic or minimum requirements for newborn nurseries and their conduct can be found in the New York and Chicago regulations for maternity and newborn nursery services and in similar regulations prepared by the Michigan branch of the American Academy of Pediatrics recently accepted by the Wayne County Medical Society, the Detroit

Pediatric Society, the Michigan Society of Obstetricians and Gynecologists, and the Detroit Hospital Council. In brief, minimum requirements which aid materially in prevention of outbreaks of diarrhea of the newborn are as follows:

Hospital Facilities for Care of the Newborn

1. Where the size of the hospital permits, maternity and nursery sections should be separated from other services; where this is not possible, obstetrical cases should be grouped together.
2. Nurseries should not be near labor or service rooms nor should they be placed on busy corridors.
3. Facilities for housing newborn infants should consist of one or more well-baby nurseries, an isolation nursery, and a nursery for premature infants.
4. Nurseries for well babies should be adjacent to the maternity ward or floor to obviate transporting the infants for a long distance. The isolation nursery should be apart and some distance from the regular nursery.
5. Infants should be transported to the mother in their individual bassinets and not in "carryalls" or group carriers.
6. All ill babies or those born of ill mothers should be placed in the isolation nursery.
7. Babies born outside the hospital should not be admitted to newborn nurseries, nor should mothers delivered outside the hospital be admitted to the maternity floor.

Nurseries, Equipment and Supplies

1. The nursery should be light, airy, well ventilated, with humidity controlled.
2. There should be an anteroom to the regular nursery for examination of infants and the housing of examination instruments, with facilities for the scrubbing of hands. Physicians should not enter the nursery.
3. Infants should have individual bassinets.
4. The space allotted to each infant should consist of 20 sq. ft. or 200 cu. ft. Bassinets should not touch one another.
5. Equipment in the nursery should be limited to furnishings and supplies necessary for the care of newborn infants.
6. There should be an ample supply of hot and cold running water in all nurseries.
7. Bathing of the infant should not be done at a common table or slab; rather bathing should be done in the bassinet, using properly labelled individual equipment, including a thermometer.
8. Babies should be weighed after the bath and the scales should be redraped after each weighing.
9. The changing of diapers should be done in the bassinet.
10. Hampers should be provided for soiled linen and diapers and for containers and waste. Soiled material and waste should not be allowed to accumulate.
11. Refrigeration should be adequate to accommodate all formulas for a period of twenty-four hours.
12. Cleaning in the nursery should be restricted to wiping with moist cloths and the cleaning of floors by mopping. This should be done during the time the infants are out of the nursery. Dry sweeping or dusting should be prohibited.

Formula Room

1. The formula room should be separate from the diet kitchen and nursery.
2. Supervision of the formula room should be in the hands of a dietitian or nurse especially trained for the purpose.
3. Individuals who prepare formulas should scrub as for a surgical operation before, and maintain aseptic technique during, the preparation of formulas. They should not engage in work which necessitates their caring for, or coming into contact with, infected infants or adults, nor with the professional or service personnel of nurseries for the newborn.
4. Formula bottles, bottle caps, nipples and utensils should be sterilized just prior to preparation of formulas. The sterilization should be done in a place other than the formula room.
5. All formulas should be prepared in the central formula room. The day's supply for each infant should be made up at the same time and each bottle should be properly labelled and placed in a wire rack. When all formulas have been prepared, racks should be transported to the nursery refrigerator. Formulas should not be stored in bulk.

Nursing Personnel

1. Each nursery should have separate nursing personnel under a supervisor who is a registered

graduate nurse, preferably with special nursing training.

2. An adequate number of nurses (optimum—one nurse for each eight infants) should be provided for duty covering the entire twenty-four-hour period.

3. There should be no interchange of nursing personnel between the isolation and well-baby nurseries.

4. Nurses other than those connected with the newborn nursery should not enter the nursery except private duty nurses caring for an infant.

5. The care of premature infants should be in the hands of a graduate nurse who has had special training in the care of premature infants.

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MSMS

The Newlyborn Period as a Public Health Problem*

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The problem of the care of the newborn has changed so rapidly in the last few years with the increase of hospital care for deliveries that new problems have to be met and new situations encountered. As a consequence we must review the whole problem of the care of the newlyborn infant with this in view. Mortality statistics show some reduction but not sufficient. The matter of maternal nursing is one of the most serious problems to be met and conquered. Other conditions such as epidemic diarrhea, impetigo, septicemia and especially prematurity must be considered and ones which must be met with all newer factors in view. Question of the newborn nursery and the place of the public health authorities in control are subjects for our examination.

■ It is only within recent years that the newlyborn period has been considered as anything but a private concern of the physician and mother. It has entered very little into the public health efforts and it is only with our success in overcoming the conditions of infancy that the

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mortality statistics in the first few weeks of life began to assume a position which they had long since deserved. The reason for this was that while we were able to reduce the death rate in

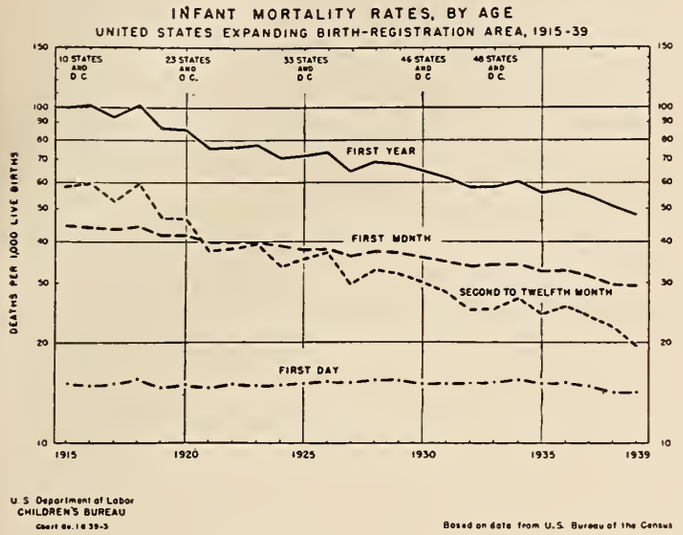


Chart I.

children past the newborn period, there was little or no reduction in the first two weeks of life and while the picture is somewhat better at the present time, still there are a large number of conditions which produce death at this age which have very largely baffled us in our attempts to conquer them.

There, too, have been two general conditions which have affected the newborn materially and which, although by no means new, at least have assumed much larger proportions within recent years. I speak of the hospitalization of maternity cases and the universal use of anesthesia during delivery. The increased hospitalization of maternity cases has meant that the hospitals have assumed the care of a physiological condition more or less as a preventive measure. Certainly the birth of a child may be regarded as a normal function of the human body and the hospitalization of maternity cases has had as one of its chief reasons the reduction of danger to the mother at this period. Both, the mother and baby, have been subjected to a certain amount of risk as the result of this. If anyone will take the trouble to look up the statistics of the maternity hospitals in the pre-antiseptic era, one will see that the mortality of these mothers was extremely high. With our modern techniques such conditions are reversed and it is certainly unusual for mothers to suffer from infections at childbirth if they are hospitalized.

There are, however, to the child, certain hazards which on the surface are not apparent. One can, of course, readily understand that the child is subjected to epidemics, diarrhea and

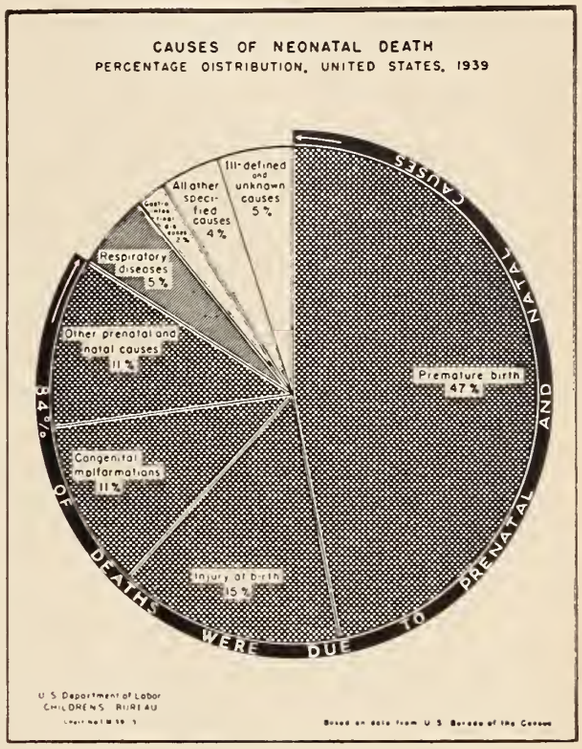


Chart II.

impetigo and to other infectious conditions which may be contracted in spite of the greatest watchfulness on the part of the personnel of the hospital, but there is another hazard which it seems to me, though less evident, is really of greater moment and that is the hazard of a well child taken care of in a hospital. The interpretation of everything that happens to that child or every sign or symptom that the child may have is based on the pathologic rather than the physiologic. All too frequently the doctors and the nurses have no adequate conception of the physiology of this period with a consequence that they interpret what they see often times incorrectly.

The importance of the newborn period from the standpoint of public health is only partially shown in mortality statistics but consideration of these will give us some idea of the difficulties which we may encounter. In the first place let me show a recent chart which was prepared by the Children's Bureau showing the infant mortality rates by age. In Chart I we see that the death rate in the first day of life has not materially changed in the last twenty-five years. That while there has been a marked reduction

in the death rate between the second and the twelfth month, a fall from sixty to twenty, there has been but a very slight decrease in the first month and that the deaths in the first month of

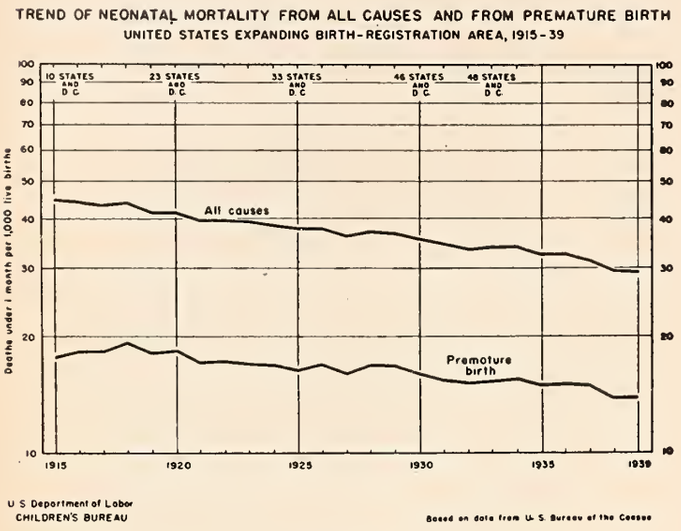


Chart III.

life constitute three-fifths of the deaths in the first year of life. If we turn next to Chart II, which again is taken from the reports of the U. S. Children's Bureau, showing the breakdown of the neonatal deaths, we find that 84 per cent were due to prenatal influences and natal causes. We will come back to this presently. The other conditions mentioned here are probably more amenable to correction than are those due to prenatal influences. In Chart III we find that the mortality trend in the neonatal period has been slowly downward, that the decrease in mortality has been greater in the group as a whole than in those of premature birth.

In considering the causes of death in the newborn, we are very much disturbed by the fact that 84 per cent are due to causes over which we have so little control. It is true that injury at birth constitutes 15 per cent. It is also true that this number may be materially reduced with better obstetrics, but viewing the other 69 per cent we must pause and consider. The cause of prematurity in the vast majority of cases escapes our knowledge and while we may be able to find this cause and correct it, it seems unlikely to me that we will for many years to come, have a group of prematures in almost like proportion. That knowledge of their care may reduce the mortality is certainly true but if we consider, as some do, that at least 25 per cent of conceptions are not brought to the point where they are readily recognized medically but that the fetus is extruded before this time, we cannot expect too much of a reduction in the number of prematures because anything which will tend to reduce prematurity it seems logical to expect would also carry such conceptions further along towards term, so that while we may, by giving careful attention to premature infants, reduce the mortality in these conditions, we are not likely to reduce materially the number or percentage of premature deliveries.

Strange as it may seem the question of congenital deformities may be viewed with a certain amount of hope. This hope lies in the fact that as the result of animal experiments it seems not at all unlikely that some deformities may be based on inadequacies of diet. If this be true then betterment of the general diet of the country at large would mean a decrease in the number of cases of congenital deformities. We do not know enough yet about this subject to lay stress on just what portions of the diet should be stressed. Another thing which is certainly determining in this situation is that practically all congenital deformities have their origin before the second month of intra-uterine existence, therefore, usually before there is any knowledge of the conception. As a consequence it would be possible in the individual instance only rarely to prescribe a diet. This diet would have to be something which had been followed previously. We will take up later the question of those conditions contained in the 16 per cent not yet discussed, but we can say that of the 84 per cent, there is still a chance for definite reduction of the mortality.

As indicated previously one of the hazards with respect to the newborn child is the question of breast feeding. This is of much importance since the determination as to whether or not the child shall be nursed by the mother is made in the first few days of life. Almost never does a child pass this period as a bottle-fed baby and later develop the mother's breast. It is therefore important that we look into this situation carefully so that we may meet the condition in the best possible way.

Breast Feeding

I must take the position that breast milk is the best food for the infant. This does not mean that occasionally breast milk is not good nor that occasionally artificial food is not better,

but taken by and large, there is no evidence that I have ever seen that a child can be brought up as well on artificial food as it can on breast milk and this in spite of all the advances that have been made in the science of nutrition within the last few years. It seems to me, therefore, that it would be wise to use every effort possible, first, to see that the child gets its proper heritage which is breast milk and, second, to see that the mother who gives it is properly nourished. There are certainly things that in recent years have militated against breast feeding. One is the widely accepted fallacy that artificial food is as good as breast milk for a human nursling. A second is, as previously indicated, that delivery in the hospital has resulted in two setbacks; one, the overuse in many instances of anesthetics and sedatives during delivery which has often resulted in the birth of a child cyanotic and comatose, conditions which may remain for two or three days, the period which is of the utmost importance to the child so far as developing the flow of breast milk is concerned; and second, these children are born in a hospital and being born in a hospital they are patients of a hospital and being patients of a hospital they are regarded as pathologic entities. This is of course far from the truth. The importance of this is the psychological effect upon the doctors, nurses and other attendants. Let me illustrate by a practical example. Some years ago at the Rush Medical College in Chicago there was developed an outpatient newborn service. This was in addition to the inpatient service for those who could not afford to pay. If anything, the group in the hospital were in somewhat better circumstances than those who were delivered in the home. A small percentage of those in the hospital were pathologic labors. This was not true in the home, but the percentage was very small. After we had been taking care of the newborn in the outpatient department for some years, we began to take stock and from our records it was very apparent that about 97 to 98 per cent of the babies were terminating the lying-in period on the breast. We then looked into the situation so far as the hospital was concerned. This was a hospital where for years the pediatric service had had charge of the newlyborn. Not only that, but the pediatricians in this hospital were sold to the idea that children should be brought up on the breast. Yet in spite of these circumstances we found that less than half of the babies were ending the lying-in period on the breast. There was certainly something about the hospital that made this difference. The simplest thing that occurred to us was that we were not using the proper technique for getting the babies to take the breast so we decided that we would adopt a general rule: "That no baby should be given artificial food until it was a week old." Now, of course, rules have to be broken and in a few instances unquestionably that was true here but by sticking as close to this rule as we could we raised the number of babies leaving the hospital at the end of the lying-in period on the breast, to just about 90 per cent. My interpretation of what happened is that the nurses and doctors felt that because these children were in the hospital and because they were losing weight they had to be fed. They failed to realize the fact that most of the loss of weight came from the loss of feces and urine and was not in the true sense of the word a reduction in the child's nutrition, but the very process of offering a bottle to these children resulted in them being unwilling to work hard enough to develop the breast and therefore these children were denied the privilege of being nourished on their mother's milk. I trust that no one will interpret this as meaning that I think all children fit into a groove and that they must be taken care of in a certain way. I most assuredly do not. Each child is an individual problem and must be treated as such. The important thing is to have a certain amount of common sense and a proper perspective on the part of the doctors and nurses.

Epidemics

Very closely allied to this subject is the question of epidemic diarrhea in the newborn period. This situation is a hard one to meet because the evidence of the source of infection, for infection it doubtless is, is extremely hard to obtain. Even in those newborn wards which are most properly administered, an occasional epidemic of this type is likely to occur. There are two things that may be said, however, regarding epidemic diarrhea. One is that these epidemics develop with much less frequency in hospitals where the children are largely on the breast and the second is that breast feeding is of paramount importance in the treatment. Again I would not be misunderstood. Infections can come from any place.

They can come from bottles, or they can come from hands. They can even come from the air. We, therefore, by promoting breast feeding will not do away with such epidemics but we will certainly decrease their severity and their frequency.

My next subject is one which has been a severe trial to all hospitals which for any length of time have had a newborn ward. I speak of impetigo or pemphigus of the newborn. It seems impossible by any technique so far devised to prevent the occasional development of this condition. Not only is this true but it is also true that the condition develops in the home in isolated cases. The only thing that can be done when it does develop is to isolate the children affected absolutely, close the newborn ward in which these infections occurred and cleanse it thoroughly in every way. A change of nursing personnel may even be necessary. Whether the use of the new sulpha drugs as ointments or used internally will affect this situation, it is too early as yet to say. The condition is not without danger to the child and requires the most efficient care both of the individual case and within the hospital.

Fortunately the next condition which I wish to discuss is becoming more and more rare, namely, septicemia. This occasionally occurs under modern conditions. The number of such cases of birth infections is certainly decreasing and will probably continue to do so. Other infections such as tetanus and respiratory infections are not of great moment.

Prematurity

The last group of cases is that concerned with prematurity. These account for a large proportion of the deaths in the first two weeks of life. They account for a still larger proportion of the stillbirths and it seems to me likely that for some years to come prematurity will be a major problem of child health. Those measures which will prevent the premature birth of the child will also likely prolong in other instances the period of pregnancy to the point where the child is viable. Perhaps I am wrong but I should expect that the problem of prematurity would not be essentially changed in the immediate future. There are a great many ways of stating this problem because there are a great many ways of preparing statistics. From our standpoint, the problem is not a problem of how many children live past the twenty-four-hour or forty-eight-hour period or how many die of congenital deformities and so forth; it is a question of what the actual mortality in prematurity is; and we must say that under good conditions about one-fourth to one-third of these babies are lost. There may be objections on the part of some to viewing the situation from this standpoint but certainly until we find out the means of preventing prematurity as well as the means of preventing congenital deformities and the means of preventing infections of one sort or another we must regard these cases as medical cases which are subject to the proper kind of treatment if such treatment is developed. Unless we approach the problem of prematurity from this angle we are not, from a public health standpoint, capable of giving it the kind of attention which it deserves. Now when we approach the subject of prematurity in this manner we find that our efforts are oftentimes inadequate. A great deal has been said and written in recent years about the apparatus which should be employed in the care of the premature infant and this is all to the good, but we are forgetting oftentimes the necessity for laying stress upon the human element. You cannot replace the nursing of a competent nurse nor the experience of a well trained and practical physician with all the apparatus in the world. Given the proper nurse and proper physician the apparatus will help but without these, the apparatus acts only as a deterrent to proper medical care because it gives one a false sense of security.

Conclusions

We see, therefore, that the newborn is very definitely a public health problem, that most of the conditions which affect it adversely from a mortality standpoint are due to the natal or prenatal conditions; that, however, those conditions such as diarrhea and impetigo are likely to be serious at this age and to occur in epidemic form in hospitals, a situation for which the layman will hold the hospital responsible, deservedly or not. We also must ask the hospital or rather its doctors and nurses to assume the responsibility of promoting breast feeding within its walls since such a large proportion of babies are now born in hospitals. This in my opinion is a matter more of the psychology of the situation than anything else.

The question then comes up as to what position

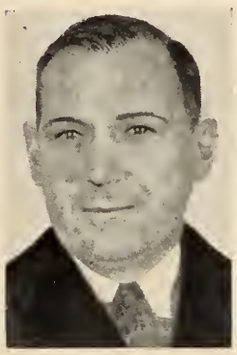
public health authorities should take in respect to these questions. It is becoming more and more evident to hospitals that to protect themselves they must have public health regulations for the protection of the newly born infant; that the state or municipal authorities must supply these regulations and see that they are lived up to. The protection afforded a hospital under these conditions is self-evident and it simply brings about a condition whereby the newlyborn receives the care and attention which it deserves.

NOTE: The three charts accompanying this paper are published with the consent of the U. S. Children's Bureau, Department of Labor, Washington, D. C.

MSMS

Vertigo*

By J. Lewis Dill, M.D.
Detroit, Michigan



M.D., University of Toronto, 1925. Certificate American Board of Otolaryngology. Member American Academy Ophthalmology and Otolaryngology.

The paper defines vertigo, outlines the various forms and summarizes the symptoms and diagnosis. A case is reported of psychogenic vertigo.

A DISCUSSION of the symptom vertigo would avail naught unless we first have a clear understanding of what this term implies. True vertigo manifests itself as a sense of rotation, either of the patient or of the surrounding objects, and must not be confused with dizziness, which implies a feeling of light-headedness, weakness or faintness. It is often difficult even with a thorough history (and we must obtain an accurate and careful history) to interpret the symptoms which the patient so frequently describes with difficulty. We have been aided by asking the patient to compare his symptoms with those which are produced by a caloric test.

The definition of vertigo given by W. Russell Brain[3] is: "the consciousness of disordered orientation of the body in space." This may be so mild as to be recognized only as a fleeting sensation of rotation, barely perceptible, or so severe that the patient may be thrown to the ground. Usually vertigo is described as unsteadiness or staggering while walking, or as an attack of rotation, frequently accompanied by nausea or vomiting, fullness in the head, blurred vision and often frequency in urination.

The conclusion that a patient is suffering from vertigo, and the determination of the cause of this vertigo, may only be ascertained after a thorough otological examination which includes hearing and vestibular tests, and may require consultations with the ophthalmologist, the internist, the neurologist and the psychiatrist.

The causes of vertigo are so diverse it is possible to enumerate but a few. I would like to discuss at some length the local causes of vertigo in the ear, and to mention only the more remote causes.

Causes

1. *Ocular.*—Eye conditions do produce dizziness but I believe rarely cause vertigo. Adler[1] states that ocular vertigo is nearly always a physiological reaction and is never very severe. It may occur in muscle imbalance or paralysis, and diplopia.

2. *Neurological.*—A great variety of lesions—vascular, infections, tumors or trauma involving any region of the central nervous system may produce vertigo. Tumors which are slowly expansile must destroy the vestibular pathways to produce vertigo. Alpers[2] mentions the following:

(a) Auditory nerve—cerebello-pontine angle tumor, aneurysm, and arachnoiditis.

(b) Brain stem—syphilis, poliomyelitis, hemorrhage, hypertension, multiple sclerosis, syringobulbia, thrombosis of one of cerebellar arteries, infiltrating tumors of pons, medulla or brain stem.

(c) Cerebellar—tumors, abscesses, cysts, hemorrhage.

(d) Cerebral—tumors and abscesses, encephalitis, syphilis, thrombosis of cerebral vessels, cerebral hemorrhage, subarachnoid hemorrhage, anoxemia, trauma.

*Read before the Seventy-seventh Annual Meeting of the Michigan State Medical Society at Grand Rapids, Michigan, September 25, 1942.

3. *Systemic.*—Arteriosclerosis, hypertension, hypotension, cardiorenal disease, anemia, metabolic disturbances, (diabetes, hypothyroidism) drugs, (quinine, nicotine, salicylates) allergy, infections from teeth, tonsils, gastrointestinal tract, occasionally in mumps, measles and scarlet fever.

4. *Aural.*—

(a) Otitis media—Vertigo may occur in acute infections of the middle ear and is generally relieved by a paracentesis. In an acutely discharging ear, vertigo is a dangerous symptom and indicates a perilabyrinthitis, which, unless interrupted, may rapidly spread to the labyrinth and meninges, resulting in a total loss of hearing, a dead labyrinth and a purulent meningitis.

Vertigo is much more common in chronic otitis media, and not infrequently is associated with the presence of cholesteatoma or a fistula into the horizontal canal. These patients should be kept under close observation, and drainage of the suppurative process must be provided by a radical mastoid operation.

(b) Trauma—The vertigo associated with head injury may be of cortical, brain stem or of aural origin. In the latter the labyrinth may be injured either by concussion or fracture of the temporal bone. Fractures of the temporal bone may be longitudinal with injury to the middle ear, or transverse involving the inner ear. Grove[4] states that when "there is a marked hemorrhage into the vestibule or when the vestibule has been fractured, the vertigo is violent, excessive and continuous, but tends to disappear after a few weeks."

All patients with a head injury should have an immediate otoscopic examination, a hearing test when fully conscious and able to coöperate, and vestibular tests when the chance of introducing an infection has passed.

(c) Ménière's Syndrome—Although there is considerable controversy about this syndrome, I still feel we are dealing with a clinical entity, the cause or causes of which have not been determined. Hallpike and Cairns[4] have shown in Ménière's syndrome, that there is a marked dilatation of the endolymphatic spaces. Lindsay[5] reports a case of labyrinthine dropsy in a patient with a history of tinnitus and increasing deafness over a period of fifteen years, but the symptom of vertigo was absent. Patients suffering with this disease have sudden attacks of vertigo, with tinnitus and a progressive inner ear type of deafness. The tinnitus may precede the attack by weeks or months and is generally aggravated during the attack. The patient during the attack is nauseated and frequently vomits. The attacks last a few hours, recur with increasing frequency and severity, and the patient feels normal between the attacks. It is a disease of middle life and generally more frequent in men than women. It may be bilateral but generally is unilateral.

(d) Cerebello-pontine angle tumor—Patients with unilateral tinnitus and nerve deafness, for which no cause can be found, should be kept under observation as a possible eighth nerve tumor. It is difficult to diagnose these cases early, before the classical symptoms of this tumor become manifest. Vertigo is rather infrequent but when present usually occurs late in the disease.

5. *Psychogenic.*—No patient who complains of vertigo should be diagnosed as neurotic, but occasionally we are forced to this conclusion. As an example, I would cite the following case record.

M. G., aged thirty-four, female, white, No. 282997—Wassermann test negative. This patient was first seen in November, 1938, by the Neurological Department, with the complaint of dizziness and pain in the right ear. Her illness dates back to the previous May when she had an acute right otitis media. Following this she has had a persistent pain in the back of her head and tenderness over the mastoid. This has been followed by tinnitus in the right ear, and an unsteadiness in which she feels like falling to the right, and objects appear to rotate. This unsteadiness is more marked on movement, has become progressively worse and she is now a semi-invalid.

Physical examination gave essentially negative findings except for the following: Right tympanic membrane reveals slight injection in Shrapnell's area; slightly diminished hearing in the right ear; slight horizontal nystagmus, quick component to left; and hyperactive vestibular response, right ear. X-ray revealed a chronic mastoiditis with sclerosis, right, and a suggestion of involvement of the right petrous.

Neurological impression: A possible extra-cerebellar lesion.

Treatment: A simple mastoid operation, right, revealed a few dirty granulations and softening of bone beneath cortex and overlying lateral sinus plate. The deeper cells were hard and sclerotic with no evidence of infection.

Progress: This patient made a rather rapid recovery with disappearance of vertigo and pain in a few days,

(Continued on Page 494)

Public Relations

Where are the strong men of medicine today? In former years outstanding Doctors of Medicine considered it their obligation to point out to the people of our country the danger signs of the age. They strongly warned against foreign ideologies pertaining to medicine and vigorously denounced those who advocated socialized medicine. They were ever alert to encroachments upon the practice of medicine; they exposed unsound practices to the public and the profession. They boldly asked the cultists to name one scientific achievement made by a member of their school or to mention one life-saving medical discovery that had come from their fountain head of knowledge. They labeled fakers and quacks and all their nostrums. They fought to increase the educational standards and to improve the scientific training requisite to the practice of medicine. They presented facts to legislators in matters affecting medicine and directed medical legislation for the good of all people.

Surely these leaders in medicine, these prominent citizens in communities, who by their personal and professional lives commanded the respect of and rendered this service to the people, have not disappeared from our civilization! In every community there are Doctors of Medicine who do and can serve the people of their towns and cities not only in rendering good medical service but in acting as wise counselors, civic leaders, and moulders of public opinion.

The presentation to the laity of medical problems by such leaders would be most helpful to the Michigan State Medical Society. This type of public relation would be more valuable than radio addresses, written pamphlets, and discussions in daily newspapers. A request has been made that each county society select one or more physicians of the type described above. Let us consider this matter seriously and not miss the opportunity of presenting our problems to the public through the right sources.

W. H. Cummings

President, Michigan State Medical Society

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President's



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EDITORIAL

POSTWAR PLANNING

■ The National Conference on planning for war and postwar medical services held a most important all-day session in New York March 15, 1943. It was under the auspices of the Carlos Finley Institute of the Americas, with the Cooperation of the American Medical Association, the American College of Physicians, the American College of Surgeons, the American Drug Manufacturers Association, the American Hospital Association, the American Pharmaceutical Manufacturers Association, the American Pharmaceutical Association, the American Surgical Trade Association, the Wholesale Surgical Trade Association, and the National Physicians' Committee for the Extension of Medical Service. Approximately eight hundred physicians and leaders of allied medical industries attended.

The problems to be faced in the near as well as the distant future are summarized editorially by the *North Carolina Medical Journal,* April, 1934:

The conference had no legislative or executive power, and hence no motions of any kind were introduced; but considering the wide variety of topics discussed, there seemed to be rather remarkable unanimity among the audience.

1. The nature of medical practice will be changed as a result of the war. It will be necessary for us to brush up on our knowledge of some diseases regarded as peculiar to the tropics, and on others which we thought were virtually obsolete. Malaria, the dysenteries, plague, typhus fever, and yellow fever are among the diseases which will assume greatly increased importance. Influenza may or may not play the villain's role it did in the first World War.

2. The shortening of the educational process, including medical education, may be permanent; this remains to be seen.

3. The United States and her allies will be militarized long after the actual cessation of hostilities; this will mean that large numbers of doctors must be kept in the armed forces. Those in civilian practice may have to surrender some, if not much, of their former independence and submit to some form of government control. Certainly, greater activity of public health departments may be expected.

4. In world rehabilitation, the medical profession will be expected to play an important part; how important remains to be seen. The Red Cross is the logical agency to take the lead in distributing relief to the world.

5. Plans should and doubtless will be made to forestall the tremendous waste of medical and surgical supplies left over at the close of the war. Many of these will be needed by the Red Cross in the work of rehabilitation; the hospitals will need to replenish their depleted stocks; and various other outlets for surplus materials can be found.

6. The task of planning for war and postwar medical services is so gigantic and each of the many groups now functioning is so engrossed with its own problems that it seems urgently necessary to have a single agency or committee to coördinate the various medical and allied advisory groups associated with official and semi-official agencies in the great task of winning the war and of preparing for its aftermath.

Medicine is the profession above all others that is called upon to sacrifice, to help, and to donate in all health movements. To insure cooperation, and in justice, organized medicine should be consulted in all matters of health legislation and regulation. We should demand such consideration.

WHERE DOES IT LEAD?

■ The art and practice of medicine in the United States has in the past generation become recognized as of the highest standard. Practitioners are among the world's leaders alongside American engineers, teachers and businessmen. It has been a long and persistent climb from the time that a doctor's education was not considered complete without a study period in Europe. American medicine has become of age, and her accomplishments are only beginning.

Medicine has supplied about 45,000 men to the armed forces, and given our soldiers and seamen a potential service not to be outdone anywhere. About 10,000 more will go this year. Another 25,000 are working actively in Selective Service, without compensation.

At home doctors of medicine regardless of age are serving the civilian needs, industry, and the rapidly expanding defense communities so well that all essential services are functioning to capacity: The hospitals are full, the health departments are more active than ever before, the medical colleges have been stepped up in tempo,

nurses are being trained and no one wants for necessary medical care.

Doctors of medicine are meeting the challenge of all-out warfare by adjustment to new conditions and demands. The army and navy have been served as have also the hospitals, the home and office needs, and increasing calls of industry.

In spite of such unselfish and magnificent showing which medicine has made, it is evident that efforts at fundamental changes of medical life and practice are being fostered in an endeavor to further a national socialism, such as hinted by the Delano plan, and using the national emergency as a cloak for departure from our democratic ways which have built up American medicine to its present level. The status of medicine may be of secondary consideration to government leaders, the first being a new world order, freedom from want (of medical service).

The latest pressure is the use of a $1,200,000 federal appropriation made March 18, 1943, which made available to Michigan a fund of $37,500 plus, to provide medical, nursing, and hospital maternity and infant care for wives and infants of enlisted men in the armed forces, and offering to pay $40.00 for complete maternity care, this to be arranged for and paid through the Michigan Department of Health, and to be available to soldiers' wives without regard to indigency. The proposed federal grant for next year is five times that for this year, $6,000,000. This money is to be disbursed through the director of the Bureau of Maternal and Child Health of the Michigan Department of Health. This makes the first time the Michigan State Department of Health has embarked upon the practice of Medicine, and this is only obstetrics and pediatrics. What is to prevent the Department from including care for any illness, or any surgery, or eye, ear, nose, and throat next month —or next year?

We are told this is temporary, for the duration of the war and six months after, but nothing is so permanent as a temporary expedient. Soldiers' wives will then be veterans' wives.

The wives of our soldiers will receive all needed care from our doctors of medicine with or without a fee, or this proposed program.

If the anxiety for soldiers' wives is a true one why not use some measure or effort to relieve those wives of the housing worries? Why not provide for relief of living costs? Why not look after needed dentistry? These may be more pressing than medicine.

Most of the doctors of medicine at home as well as those in the armed forces wish to return to and continue the practice of medicine and surgery in an American and democratic way. They realize that many economic changes are inevitable in the immediate future, but hope to forestall too radical ones.

In adjusting themselves to wartime needs and postwar changes physicians must remember that they have the faculties of leadership, and those with such potentialities have an added moral duty to preserve for their brothers who are fighting the Nation's battles on foreign fields some semblance of the practice to which they hope to return. If through indifference, or inaction, or greed sacred privileges are lost the criticism can only be what has been earned, but then it will be "too late."

Do the individual doctors want this subsidy with all it portends?

SEVENTY-EIGHTH ANNUAL MEETING

■ The 1943 Michigan Postgraduate Conference on War Medicine—the 78th annual meeting of the State Society—will be held at the Statler Hotel, Detroit, September 22-23-24. The scientific program will be as stellar as in the past and will include, among the twenty-two out-of-Michigan guest essayists such famous names as Walter C. Alvarez, M.D., Paul R. Cannon, M.D., E. L. Jenkinson, M.D., Sister Elizabeth Kenny, Peter C. Kronfeld, M.D., Frank H. Lahey, M.D., Harold I. Lillie, M.D., Irvine McQuarrie, M.D., Robert D. Mussey, M.D., James E. Paullin, M.D., Edward A. Schumann, M.D., Kellogg Speed, M.D., John C. Whitehorn, M.D.

This concentrated three-day postgraduate course presents an opportunity to the busy practitioner of medicine which cannot be missed.

AGAIN BUY WAR BONDS

■ The war is coming home to us. Some of our Michigan doctors have already been invalided home, and released from service. They will resume limited practice. Their presence reminds us of our duty and our privilege of buying more and more bonds. And remember the MSMS Foundation for Postgraduate Study.

TENTATIVE OUTLINE OF "1943 POSTGRADUATE CONFERENCE ON WAR MEDICINE"

78th Annual Meeting, Michigan State Medical Society
Detroit—Statler Hotel—September, 1943

	Wednesday September 22, 1943	Thursday September 23, 1943	Friday September 24, 1943
A.M. 9:30 to 10:00	General Practice J. E. Paullin, M.D. Atlanta, Ga.	Surgery Kellogg Speed, M.D. Chicago, Ill.	Medicine Hobart Reiman, M.D. Philadelphia, Penn.
10:00 to 10:30	Surgery Frank H. Lahey, M.D. Boston, Mass.	Otolaryngology Harold I. Lillie, M.D. Rochester, Minn.	General Practice William S. Sadler, M.D. Chicago, Ill.
10:30 to 11:00	Dermatology Oliver Ormsby, M.D. Chicago, Ill.	Obstetrics Everett D. Plass, M.D. Iowa City, Iowa	Ophthalmology Peter C. Kronfeld, M.D. Chicago, Ill.
11:00 to 11:30	Radiology E. L. Jenkinson, M.D. Chicago, Ill.	Medicine David D. Barr, M.D. New York, N. Y.	Dermatology Robt. E. Barney, M.D. Cleveland, Ohio
11:30 to 12 Noon	INTERMISSION TO VIEW EXHIBITS	INTERMISSION TO VIEW EXHIBITS	INTERMISSION TO VIEW EXHIBITS
P.M. 12:00 to 1:30	Three Section Meetings Dermatology Radiology and Pathology General Practice	Four Section Meetings Surgery Otolaryngology Obstetrics and Gynecology Anesthesia	Three Section Meetings Medicine Ophthalmology Pediatrics
1:30 to 2:00	INTERMISSION TO VIEW EXHIBITS	INTERMISSION TO VIEW EXHIBITS	INTERMISSION TO VIEW EXHIBITS
2:00 to 2:30	Pathology Paul R. Cannon, M.D. Chicago, Ill.	Pediatrics A. Ashley Weech, M.D. Cincinnati, Ohio	Medicine Walter C. Alvarez, M.D. Rochester, Minn.
2:30 to 3:00	Gyn. & Obstetrics (Maternal Health) Edward A. Schumann, M.D. Philadelphia, Penn.	Medicine John C. Whitehorn, M.D. Baltimore, Md.	Gynecology Robert D. Mussey, M.D. Rochester, Minn.
3:00 to 3:30	Pediatrics Irvine McQuarrie, M.D. Minneapolis, Minn.	Surgery General Norman T. Kirk, M.C. U. S. Army	Pediatrics Sister Elizabeth Kenny Minneapolis, Minn.
3:30 to 4:00	INTERMISSION TO VIEW EXHIBITS	INTERMISSION TO VIEW EXHIBITS	INTERMISSION TO VIEW EXHIBITS
4:00 to 5:00	DISCUSSION CONFERENCES with guest essayists	DISCUSSION CONFERENCES with guest essayists	DISCUSSION CONFERENCES with guest essayists
5:00 to 6:00	INTERMISSION TO VIEW EXHIBITS	INTERMISSION TO VIEW EXHIBITS	END OF CONVENTION
8:30 to 10:00	PRESIDENT'S NIGHT Biddle Oration		

MICHIGAN STATE MEDICAL SOCIETY

The 78th Annual Meeting

Postgraduate Conference on War Medicine

DETROIT—1943

Official Call

The Michigan State Medical Society will convene in Annual Session in Detroit, Michigan, on September 20-21-22-23-24, 1943. The provisions of the Constitution and By-laws and the Official Program will govern the deliberations.

H. H. Cummings, M.D., *President*
A. S. Brunk, M.D., *Council Chairman*
P. L. Ledwidge, M.D., *Speaker*
G. H. Southwick, M.D., *Vice Speaker*
Attest: L. Fernald Foster, M.D., *Secretary*

House of Delegates

Monday and Tuesday, September 20-21, 1943
Statler Hotel, Detroit

MONDAY, SEPTEMBER 20

7:30 p.m. Registration of Delegates
8:00 p.m. First Meeting, Ballroom

TUESDAY, SEPTEMBER 21

10:00 a.m. Second Meeting, Ballroom
8:00 p.m. Third Meeting, Ballroom

(Such additional meetings as necessary will be held Wednesday, September 22, beginning at 10:00 a.m.)

HOUSE OF DELEGATES, 1943

Ballroom, Statler Hotel, Detroit

ORDER OF BUSINESS*

MONDAY, SEPTEMBER 20

8:00 p.m.—First Meeting

1. Call to order by Speaker
2. Report of Committee on Credentials
3. Roll Call
4. Appointment of Reference Committees:
   - (a) On Officers' Reports
   - (b) On Reports of The Council
   - (c) On Report of Standing Committees
   - (d) On Reports of Special Committees
   - (e) On Amendments to Constitution and By-laws
   - (f) On Resolutions
5. Speaker's Address—P. L. Ledwidge, M.D., Detroit
6. President's Address—H. H. Cummings, M.D., Ann Arbor
7. President-Elect's Address—C. R. Keyport, M.D., Grayling
8. Annual Report of The Council—A. S. Brunk, M.D., Detroit, Chairman
9. Report of Delegates to American Medical Association — Henry A. Luce, M.D., Chairman
10. Resolutions**
11. Reports of Standing Committees:
    - (a) Legislative Committee
    - (b) Committee on Distribution of Medical Care
    - (c) Representatives to Joint Committee on Health Education
    - (d) Medical-legal Committee
    - (e) Preventive Medicine Committee
      - Cancer
      - Maternal Health
      - Syphilis Control
      - Tuberculosis Control
      - Industrial Health
      - Mental Hygiene
      - Child Welfare
      - Iodized Salt
      - Heart and Degenerative Diseases
    - (f) Committee on Postgraduate Medical Education
    - (g) Committee on Public Relations
    - (h) Committee on Ethics
12. Reports of Special Committees:
    - (a) Committee on Nurses' Training Schools
    - (b) Conference Committee on Prelicensure Medical Education
    - (c) Radio Committee
    - (d) Advisory Committee to Woman's Auxiliary
    - (e) Scientific Work Committee
    - (f) Professional Liaison Committee
    - (g) Beaumont Memorial Committee
    - (h) Medical Preparedness Committee
    - (i) Postgraduate Extension Committee

Recess

TUESDAY, SEPTEMBER 21

10:00 a.m.—Second Meeting

1. Supplementary Report of Committee on Credentials
2. Roll Call
3. Greetings from the Allied Professions
4. Unfinished Business

*See the Constitution, Article IV, and the By-laws, Chapter 3, on "House of Delegates."

**All Resolutions, special reports, and new business shall be presented in triplicate (By-laws, Chapter 3, Section 7-n).

5. New Business***
6. Reports of Reference Committees:
   (a) On Officers' Reports
   (b) On Reports of The Council
   (c) On Reports of Standing Committees
   (d) On Reports of Special Committees
   (e) On Amendments to Constitution and By-laws
   (f) On Resolutions

Recess

TUESDAY, SEPTEMBER 21

8:00 p.m.—Third Meeting

1. Supplementary Report of Committee on Credentials
2. Roll Call
3. Unfinished Business
4. Supplementary Report from The Council
5. Supplementary Report from Reference Committees
6. Elections:
   (a) Councilors:
   11th District—O. D. Stryker, M.D., Fremont, Incumbent
   12th District—A. H. Miller, M.D., Gladstone, Incumbent
   13th District—W. H. Huron, M.D., Iron Mountain, Incumbent
   (b) Delegates to American Medical Association:
   L. G. Christian, M.D., Lansing—Incumbent
   F. E. Reeder, M.D., Flint—Incumbent
   (c) Alternate Delegates to American Medical Association:
   Ralph H. Pino, M.D., Detroit—Incumbent
   I. W. Greene, M.D., Owosso—Incumbent
   (d) President-elect
   (e) Speaker of House of Delegates
   (f) Vice-speaker of House of Delegates

Adjournment

***All Resolutions, special reports, and new business shall be presented in triplicate (By-laws, Chapter 3, Section 7-n).

SOME ADDITIONAL BENEFITS OF MEMBERSHIP

(Continued from Page 226, March MSMS Journal)

The Michigan State Medical Society and its component county societies bring you these valuable benefits of membership:

11. Maintenance and constant improvement of standards of medical practice for the protection of patients.
12. Benefits accruing from the action of numerous committees constantly working to advance your interests as a physician in your community; machinery solving problems of preventive and curative medicine which could not be worked out by you as an individual, even with a great sacrifice of time and effort.
13. Participation in the varied activities of the county and state medical societies—all designed to preserve the physician-patient relationship.

ANNUAL REPORT OF THE MSMS LEGISLATIVE COMMITTEE, 1942-43

The 62nd Michigan Legislature convened on January 6 and adjourned March 26, 1943, accomplishing much of value during its shortest session in nearly a century. In the three-month period, 726 bills were introduced, of which fifty-two dealt directly with or touched the practice of medicine; of these, eighteen were passed by the Legislature; an additional four passed one House but died in the other branch; the balance either died in committee or were killed on the floor.

The medical profession fared well at the hands of the friendly 1943 Legislature which enacted into law the important measures sponsored or approved by the State Society. On the other hand *no proposed legislation that would have lowered our present high medical standards—and thereby would have been detrimental to the public health and welfare of Michigan—was enacted into law this session!* Needless to say, the State Society's representatives in Lansing were never so active in so concentrated a period of time as during the 1943 session.

Fifty-two Bills Affected Medical Practice

Below are listed the fifty-two bills which affected or were of interest to the medical profession. A brief description of the proposals together with the action taken is presented:

1. Workmen's Compensation Act (Substitute SB 182): *The greatest threat to the medical profession and to the high quality of medical service rendered Michigan workers under the Workmen's Compensation Act* was made by a last-minute amendment to Substitute SB 182, the bill making the first general revision to the Workmen's Compensation Act in thirty-two years. After the Senate by unanimous vote adopted a compromise bill satisfactory to all interested parties, the House Committee on Labor offered thirty-six liberalizing amendments, including "free choice of all healers." This would have permitted not only all members of the medical profession but some eighty-one groups of cultists to render "medical" service to injured workmen! (See list of eighty-two medical and quasi-healing groups on page 479). Fortunately, most of the thirty-six amendments were beaten down successfully in the House; however, the free choice amendment, changed to "licensed physicians," was adopted by the House. "Licensed physicians" under Michigan law and a Supreme Court interpretation covering workmen's compensation, would include Doctors of Medicine, osteopaths and chiropractors. After thirty hours of worrisome maneuvering, this destructive amendment was eliminated on the last night of the session by a five to one vote of a Conference Committee. (The five members of the Conference Committee who voted against the free choice amendment were Senator Jerry T. Logie, Bay City, Senator G. Elwood Bonine, Vandalia, Senator Harry E. Hittle, East Lansing, Representative J. B. Stanley, Kalamazoo, and Representative T. J. Whinery, Grand Rapids.) As finally adopted by the Legislature, the medical provisions of the Workmen's Compensation Act remain unchanged except that the period of medical care for injured employes is increased from ninety days to six months so that Section 4 of Part II of the Workmen's Compensation Act now reads: "The employer shall furnish, or cause to be furnished, reasonable medical, surgical and hospital services and medicines when they are needed, for the first six months after the injury and thereafter for not more than an additional six months in the discretion of the commission, upon written request of the employe to the commission and after the employer or his insurer has been given an opportunity to file objections thereto and to be heard thereon." (Act No. 245 of P.A. 1943)

2. Chiropractic Proposals (HB 99 and 100). These selfish bills, introduced by two leaders of the House, were a cause of grave concern to your Legislative Committee throughout the entire 1943 session. They proposed to liberalize the scope of chiropractors' practice and authorize the use of the qualified title "doctor"; also to open the facilities of all State Laboratories to "licensed healers'" (including chiropractors). Your representatives found it a most difficult task to counteract the intense day-and-night effort of the active chiropractors' lobby which attempted to press these bad proposals out of committee. Every device in the chiropractic bag-of-legislative-tricks was utilized until the bitter end of the session. However, a wise majority of the House Public Health Committee voted to hold the bills in Committee permanently. Those who opposed the chiropractic bills were: Representatives Dora H. Stockman, East Lansing; Charles R. Feenstra, Grand Rapids; S. L. Loupee, M.D., Dowagiac; and Walter N. Stockfish, Detroit. Those who voted to report the bills favorably to the House were Warren G. Hooper, Albion (lobbyist for the osteopaths) and Fred L. Kircher, Lansing.

3. Naturopathic Bill (HB 102): This bill was practically the same as the ridiculous 1941 proposal except that naturopathy was not defined. The sky would have been the limit so far as naturopathic practice was concerned! The bill would have made "doctors" out of certain physical therapists and drugless healers. This bill died in the House Public Health Committee, thanks to the above mentioned friends of the medical profession who proved their sincere interest in the people's health.

4. Afflicted-crippled Children Acts (HB 248-250): These amendatory bills were the result of several months' study and joint effort by a group representing the Michigan State Medical Society, the Probate Judges Association, the Michigan Crippled Children Commission, the Michigan Society for Crippled Children, the Michigan Welfare League, and the Michigan Hospital Association. The bills clarified administrative procedures, increased the maximum on hospital rates to $5.00 and on surgical fees to $75 with a limit of $200 to any one doctor for any one patient in a twelve-month period. The bills were passed unanimously by both Houses and signed by the Governor. Better service for crippled and afflicted children will result from this worthwhile legislation. The thanks and congratulations of the medical profession and of the people are due the Legislature for the passage of these bills. Acts 225 and 227 (PA 1943).

5. Barbituric Acid Control (HB 59-HB 277): HB 59, introduced early in the session, contained the same objectionable "bookkeeping" amendments as the 1941 proposal which died in conference committee two years ago; after meetings with the medical profession, the introducer agreed to eliminate the burdensome provisions and reintroduced the bill as HB 277 which received the approval of the Michigan State Medical Society. The bill was passed by both Houses but went to Conference Committee over the inclusion of the word "administration"; the Legislature finally adopted the bill with "administration" therein. The Governor approved the bill (Act No. 204 P.A. 1943).

6. Wayne University Hospital (SB 300): This enabling act authorized a local appropriation of $2,000,000 to construct a hospital in connection with Wayne University School of Medicine, Detroit. The bill was amended at the request of the Wayne County Medical Society to limit the institution to 350 beds and to indigents and to insure three Doctors of Medicine on the seven-man board, and passed both Houses of the Legislature. Signed by the Governor the bill became Act No. 236 P.A. 1943.

7. Sterilization Act (HB 397): This amendatory bill permits a surgeon's fee of $50 when operation is performed outside the University of Michigan Hospital; pay for hospital care in U. of M. Hospital is also authorized but not the surgeon's fee. Passed by both Houses and signed by the Governor (Act No. 235 P.A. 1943).

8. Medical Care of Afflicted Adults (HB 245): This bill, providing that the economic investigation of afflicted adults shall be made by the department of social welfare in counties having a Board of Auditors, was passed by the Legislature and signed by the Governor (Act No. 216 P.A. 1943).

9. Postponement of Service Men's Taxes (HB 199): This bill, cancelling taxes on real estate of persons in the armed forces until 1 year after the end of the war, and staying of any scheduled sale of the properties of service men for nonpayment of taxes—limited to homestead property—was passed by the Legislature and signed by the Governor (Act No. 131 P.A. 1943).

10. Tuberculosis Subsidy (HB 64): This proposal, to pay county tuberculosis sanatoria $2.00 per day instead of $1.50 for treatment of indigent patients, (with appropriation of $2,650,000), was passed by both Houses and signed by the Governor (Act No. 169 P.A. 1943). Additional appropriation in SB 202.

11. Tuberculosis Control (SB 237): Treatment extended to all persons contracting tuberculosis while employed in a Michigan State Hospital or Sanatorium. Passed by both Houses and signed by the Governor (Act No. 176 P.A. 1943).

12. State Board of Registration in Medicine (SB 113): The Board was authorized to grant licenses to graduates of wartime telescoped medical courses. This proposal, approved by the Michigan State Medical Society, was passed by the Legislature and signed by the Governor (Act No. 33, P.A. 1943).

13. Osteopathic Board (SB 192): Authorized osteopathic registration board to modify educational requirements during war-time. This "copy-cat" bill was identical to SB 113. It passed both Houses and was approved by the Governor (Act No. 44, P.A. 1943).

14. Hospital Service Enabling Act (HB 264): This amendment, sponsored by Michigan Hospital Service, authorizes an alternate care method if hospital space is unavailable. The bill was passed by both Houses and signed by the Governor (Act No. 229 P.A. 1943).

15. Psittacine Birds (SB 301): This bill to prohibit importation of these birds except for scientific purposes to improve public health, was passed by both Houses and signed by the Governor (Act No. 164 P.A. 1943).

16. Appropriation for State Boards (HB 200): This appropriation for Institutions, Departments, Commissions and educational purposes was passed by both Houses after going to a Conference Committee. Signed by the Governor, it became Act No. 193 P.A. 1943.

17. Appropriations for Boards, Departments and Commissions Relating to Public Health (SB 202): This bill included $250,000 as an added subsidy for tuberculosis sanatoria in distressed counties. Passed by the Legislature and signed by the Governor (Act No. 197 P.A. 1943).

18. Michigan Child Guidance Institute (SB 156): This bill transferred the equipment, furniture, case-records and funds of the Institute to the University of Michigan Regents. It was passed by both Houses and approved by the Governor (Act No. 36 P.A. 1943).

19. Financial Responsibility Act (SB 99 and HB 111): These identical bills imposed the duty of reporting to the Secretary of State any accident involving death, injury, or property damage of $75 or more. SB 99 passed the Legislature and was signed by the Governor (Act No. 248 P.A. 1943).

20. Annual Physical Examination of Students (HB 62): This bill provided for an annual physical examination of all pupils under the direction of the State Department of Public Instruction. A conference of representatives of the Michigan State Medical Society, the Department of Public Instruction, the Michigan Department of Health, and the Michigan Education Association, was held. The introducers of the bill, who were present, learned of the many administrative difficulties of this proposed law which they had not foreseen. The bill died in the House Education Committee.

21. Prenuptial Physical Examination Act (HB 342): Amendment to permit marriage of persons unable to pass physical examinations, upon request of Probate Judge accompanied by physician's certificate showing female is pregnant. This proposal sponsored by the State Department of Health was approved by the House but died in the Senate Public Health Committee.

22. Prenuptial Physical Examination Act (HB 40): Members of armed forces would be exempt from the Prenuptial Physical Examination Act. The Michigan State Medical Society, the State Department of Health, the Probate Judges and the County Clerks objected to this proposal which would be the entering wedge to break down Michigan's excellent Prenuptial Physical Examination Act. After a hearing, the bill remained in the House Public Health Committee.

23. Premarital Physical Examination Act (HB 359): This bill attempted to add "mental soundness" to the Act. The Michigan State Medical Society Legislative Committee felt that it was unfair to force a physician to certify that a person is feeble-minded. The bill died in the House Public Health Committee.

24. Welfare Act Amendment (HB 244): As introduced, this bill provided for payment by the State of one-half the costs of hospitalization of those on welfare; it also increased residents' eligibility requirements from 1 to 3 years. The bill contained no safeguards to insure medical standards in the care of welfare clients. A subcommittee of the MSMS Legislative Committee was appointed to make recommendations to guide the Legislature concerning the medical aspects of this proposal. The state-pay provision was deleted by the House after a bitter legislative battle. The bill finally died in the Senate Committee on Elections.

25. Medical Treatment of Children in State Institutions (SB 9): This bill to repeal the ancient act providing that such dependent children must be transported to and treated at the University of Michigan Hospital, was killed in the Senate Committee on Welfare and Relief.

26. Insane, Feeble-Minded or Epileptic Persons (SB 294): State to reimburse county for full cost of maintenance of such persons in county institutions. Died in Senate Welfare and Relief Committee.

27. Hospitals for Contagious or Infectious Diseases (SB 295): This bill would authorize county boards of supervisors to establish, maintain and operate such hospitals; limited to county of 150,000 or over. Died in Senate Committee on Municipalities.

28. Liability for Medical Care of Indigents (HB 410-411-412): These bills would amend three welfare acts (such as Afflicted Adult) so that liability for medical care would attach to recipient and all members of his family. The proposals remained in the House Public Health Committee.

29. Barbers' and Haircutters' License (HB 80): This proposed that barbers' and haircutters' licenses should be revoked for failure to have in possession a certificate from a licensed physician showing freedom from contagious disease issued within year from date of inspection. It remained in the House Committee on State Affairs.

30. Medical Examiner System (SB 15): This system for the state, to take the place of the present Coroner System, exempting Wayne county, died in the Senate Public Health Committee.

31. Divorce on Grounds of Incurable Insanity (SB 3): This bill was considered on the floor of the Senate but re-referred to the Senate Committee on Judiciary where it rested until the session's end.

32. License to Marry (HB 39): This bill proposed to eliminate the five-day waiting period for members of the armed forces. After amendments approved by the medical profession's representatives it passed the House but died in the Senate Public Health Committee.

33. County Health Units (SB 139): This bill would have authorized an annual refund up to $3,000 to each county maintaining a single health department and if two or more counties united to form a district, $3,000 per county would be refunded by State. The bill died in the Senate Public Health Committee.

34. Michigan Youth Council (HB 219): This bill would have provided a program of special training, care and recreation outside school for children from 12 to 18 years of age; appropriation of $1,100,000. The bill died in the House Committee on Ways & Means.

35. Licensing of Boarding Homes for Children (HB 375): This bill to regulate boarding homes was not reported out by the House Committee on Social Aid and Welfare.

36. Birth Certificates (HB 255): Certificate of persons born out of wedlock not to give certain information. This proposal was not approved by the State Department of Health. It died in the House Public Health Committee.

37. Birth and Death Certificate Fees (HB 262): This proposed that said fees be paid into the general fund of a city where the health officer is paid a salary of $5,000 or more. Passed by the House, it died in the Senate Committee on Municipalities.

38. State Board of Vocational Education (SB 87): The Board would be composed of the Superintendent of Public Instruction, the President of the University of Michigan, The President of Michigan State College, two representatives of industry, two representatives of labor, appointed by the Governor. Died in Senate Committee on Education.

39. Workmen's Compensation Act (HB 176): This Michigan Federation of Labor proposal died in the House Committee on Labor. Most of its provisions were added as amendments to SB 182.

40. Workmen's Compensation Act (HB 266-270): These bills represented the so-called "majority report" of the special study commission authorized by the 1941 Legislature. These bills also died in committee as most of their provisions were tied to SB 182 as amendments.

41. Intangible Tax Law Repeal (SB 123): This Munshaw repealer was not reported out by the Senate Committee on Taxation.

42. Intangible Tax Law (SB 169): General amendments as to definitions of situs, income and owner, etc. The bill was not reported out by the Senate Committee on Taxation.

43. Rule of Imputed Negligence (HB 71): Personal injury or wrongful death actions—would abolish role of imputed negligence of driver of vehicle in cases where injured passenger seeks recovery from third person. Died in House Committee on Judiciary.

44. Rule of Imputed Negligence (SB 146 and HB 130): These companion bills were similar in import to HB 71. They both died in committee.

Thank You All

The Legislative Committee again expresses appreciation to the intelligent and health-minded members of the Michigan Legislature for their courteous consideration of the legislative problems of the medical profession and the courteous reception they extended our representatives during the 1943 session.

To his Excellency, Governor Harry F. Kelly, the Legislative Committee is grateful for the friendly cooperation he and his office extended to the medical profession in all health matters.

The Committee also says sincere "thanks" to the members of the medical profession—the legislative key-men—who kept their friends in the Senate and House informed concerning medical legislation.

The Committee expresses great gratitude to those representatives of the Michigan Association of Physical Therapists, the Michigan Tuberculosis Association, the Michigan Society for Crippled Children, the Michigan Department of Health, the Michigan Crippled Children Commission, the Woman's Auxiliary, and all other organizations allied in preserving Michigan's health standards, for the valuable and timely help they gave the State Society during the strenuous 1943 Legislative session.

The committee is especially grateful to the Council of the Michigan State Medical Society for its constant encouragement to the Legislative Committee during its ninety-day nerve-wracking job.

Respectfully submitted,
Legislative Committee, MSMS.
H. A. Miller, M.D., *Chairman*
A. S. Brunk, M.D.
R. G. Cook, M.D.
T. K. Gruber, M.D.
C. R. Keyport, M.D.
Edw. D. King, M.D.
S. L. Loupee, M.D.
G. L. McClellan, M.D.
Harold Morris, M.D.
Dean W. Myers, M.D.
E. C. Swanson, M.D.
R. V. Walker, M.D.
A. Verne Wenger, M.D.
L. G. Christian, M.D., *Advisor*

POOR HEALING SERVICE FOR WORKERS FOUGHT BY STATE MEDICAL SOCIETY

Eighty-two medical and quasi-healing groups would have been given the legal right, through an amendment approved by the Labor Committee of the Michigan House of Representatives (1943 Session), to render services to injured employes under the Michigan Workmen's Compensation Act:

Aero-therapy
Alereos System
Angiopathy
Astral Healing
Auto-Hemic Therapy
Autology
Automatic Electronic Radio Treatment
Auto-Science
Autotherapy
Autothermy

Biochemic System
Biodynamo-Chromatic Therapy
Biologic Blood-Washing
Biopneuma

Chiropractic
Chirothesianism
Christian Science
Christos (Blood Washers)
Chromopathy
Chromotherapy
Combinathics
Coueism

Diet Cure
Divine Science
Dowieism

Eclecticism
Electro-Homeopathy
Electronaprotherapy
Electronic Therapy
Electrono-Chrome Therapy
Emmanuel Movement
Erosionism

Geotherapy

Herbalism
Histolotherapy
Homeopathy

Iridotherapy

Kneipp Cure

Leonic Healers
Limpio Comerology

Magnetic Massage
Magnetism
Medical (regular)
Mentalphysics

Naprapathy
Naturopathy
Naturology
Nervauric Therapeutics
New Thought

Orificialtherapy
Osteopathy

Pathiatry
Patho-Oscillography
Parkinism
Phrenopathy
Physio-medical
Pneumatotherapy
Poropathy
Practotherapy
Prana-Yama
Psychic Sarcology

Radio Vibratory Diagnosis Treatment
Rawsonism
Reflectoclasty

Sanatology
Sanipractic
Somnopathy
Spatial Harmonics
Spectrochrome Therapy
Spectrocromists
Spiritual Science
Spondylotherapy

Telatheramy
Theophonism
Thompsonism
Therapeutic Sarcognomy
Tropotherapy

Vibriotherapy
Vita-o-pathy

Zodiactherapy
Zoism
Zonetherapy

HOSPITAL EMPLOYES NEED INSURANCE

We have been surprised to learn of a few cases in which radiologists employed on a salary by hospitals are without malpractice insurance, under the assumption that the hospital alone is liable in malpractice suits. This is wrong. The fact that a physician is an employe does not lessen his personal liability for malpractice. One of the fundamental principles of our law is that a man is personally liable for his own torts, i.e., acts of negligence for which the law provides a remedy.

An employe is jointly and severally liable along with his employer in negligence actions. A salaried radiologist who neglects to obtain malpractice insurance is practicing a dangerous economy. If the hospital's insurance does not cover the physician's liability, he should purchase an individual policy.—*American College of Radiology.*

Among radiologists practicing their profession in hospitals, 36 per cent are paid a salary. About 23 per cent receive a commission in the form of a percentage of net income of the department. Approximately 9 per cent pay a fixed rental for the use of the department. The remainder, or 32 per cent, divide gross receipts with the hospital on a percentage basis.—*American College of Radiology.*

THE MICHIGAN BARBITURIC CONTROL LAW (ACT 204, P.A. 1943)

The Barbituric Control Bill (HB 277) experienced a stormy time in the 1943 Legislature, as did its unsuccessful predecessor in 1941. The whole controversy centered around one word "administration" used in Section 1 (b). The House refused to include the word; the Senate would not pass the bill without "administration" in it! Finally, the Conference Committee voted to include the word.

A U. S. Supreme Court decision covering the Harrison Anti-Narcotic Act centered on the word "administration." In this case, decided February 2, 1942, the Supreme Court ruled that physicians who administer preparations to patients whom they personally attend are not required to keep records thereof.

Act 204 of the Public Acts of 1943, which becomes effective July 30, 1943, is printed below in its entirety. The U. S. Supreme Court decision, which guided the MSMS Legislative Committee in its consideration of the Michigan Barbituric Bill, follows the Michigan Act:

AN ACT to regulate the sale and possession of certain drugs; and to prescribe a penalty for the violation of the provisions of this act.

The People of the State of Michigan enact:

Section 1. Hereafter it shall be unlawful for any person, firm, partnership, association or corporation to sell, offer for sale, barter, or otherwise dispose of, or be in possession of any of the following drugs; barbituric acid and any of its derivatives, chloral hydrate, or paraldehyde, except under the following conditions:

(a) Manufacturers, wholesalers and retailers of drugs may sell, offer for sale, barter or otherwise dispose of, or be in possession of for sale, to licensed physicians, dentists, veterinarians, druggists, pharmacists, police laboratories and public health laboratories or hospitals, any of the following dangerous drugs: barbituric acid and any of its derivatives, chloral hydrate, or paraldehyde: *Provided, however,* That a record of all such drugs, and their disposition, shall be kept, by the manufacturers, wholesalers or retailers, which record shall be open to inspection by any officer of any organized police force of this state or any prosecuting attorney or his investigators.

(b) Licensed physicians, dentists and veterinarians may dispense or prescribe barbituric acid and any of its derivatives, chloral hydrate or paraldehyde: Provided, That a record of all such dispensations, except administration to a patient upon whom such physician, dentist or veterinarian shall personally attend, shall be kept showing the date when issued and bearing the name and address of the patient for whom, or the owner of the animal for which the drug is dispensed, which record shall be open to inspection by any officer of any organized police force of this state or any prosecuting attorney or his investigators.

(c) Druggists and pharmacists shall be prohibited from selling, giving away, bartering or otherwise disposing of barbituric acid and any of its derivatives, chloral hydrate or paraldehyde, except on prescription of a licensed physician, dentist or veterinarian, and except as such sale or possession is authorized under subdivision (a) of this section. It shall be the duty of all druggists and pharmacists to keep an accurate record of all disposals, which record shall be open to inspection by any officer of any organized police force of this state or any prosecuting attorney or his investigators.

(d) All hospitals shall keep a record of all dispositions of barbituric acid and any of its derivatives, chloral hydrate or paraldehyde, which are not actually consumed on the premises by the patients, which record shall be open to inspection by any officer of any organized police force of this state or any prosecuting attorney or his investigators.

Sec. 2. It shall be unlawful for any person, firm, partnership, association or corporation, other than a drug manufacturer or wholesaler, licensed physician, licensed dentist, licensed veterinarian, licensed druggist or pharmacist, hospital, or police or public health laboratory, to have in possession any barbituric acid and any of its derivatives, chloral hydrate or paraldehyde, unless the same are contained in the original container, as dispensed to them.

Sec. 3. It shall be the duty of every licensed physician, dentist, veterinarian, druggist, pharmacist or hospital, when dispensing any barbituric acid and any of its derivatives, chloral hydrate or paraldehyde, to mark on the dispensing container, the name of the patient, the date, and the name of the person dispensing the same.

Sec. 4. All records required to be kept under the provisions of this act shall be preserved for a period of 2 years.

Sec. 5. No prescription issued under the provisions of this act shall be refilled.

Sec. 6. Any person who shall violate any of the provisions of this act shall be deemed guilty of a misdemeanor, and upon conviction shall be subject to a fine of not more than $500.00, or imprisonment in the county jail not more than 1 year, or both such fine and imprisonment in the discretion of the court.

Sec. 7. Should any provision or section of this act be held to be invalid for any reason, such holding shall not be construed as affecting the validity of any remain-

ing portion of such section or of this act, it being the legislative intent that this act shall stand, notwithstanding the invalidity of any such provision or section.

Supreme Court of the United States

Peter Young, alias Young Lup, Petitioner, vs. The United States of America.	On Writ of Certiorari to the United States Circuit Court of Appeals for the Ninth Circuit.

Petitioner, a practicing physician, was convicted on eight counts of an indictment charging violation of Section 6 of the Harrison Anti-Narcotic Act as amended. That section, so far as here material, provides:

"That the provisions of this Act shall not be construed to apply to the manufacture, sale, distribution, giving away, dispensing, or possession of preparations and remedies which do not contain more than two grains of opium . . . in one fluid ounce . . .: Provided, that such remedies and preparations are manufactured, sold, distributed, given away, dispensed, or possessed as medicines and not for the purpose of evading the intention and provisions of this Act: Provided further, that any manufacturer, producer, compounder, or vendor (including dispensing physicians) of the preparations and remedies mentioned in this section lawfully entitled to manufacture, produce, compound and vend such preparations and remedies, shall keep a record of all sales, exchanges, or gifts of such preparations and remedies . . ."

The evidence is undisputed that petitioner gave the preparations in the quantities charged in the indictment to patients whom he personally attended. He kept no records. His defense, that the second proviso of Section 6 is not an independent and affirmative requirement but merely a condition precedent to the exemption created by that section, was rejected by the court below which took the position that the second proviso is an unconditional requirement that all vendors of exempt preparations keep records.

The Government confessed error and we brought the case here.

The Government's confession of error was originally two-fold: first, that while the second proviso of Section 6 was subject to two possible constructions, the administrative construction had been, that it was not an independent penal provision, and therefore the ambiguity should be resolved in favor of petitioner; and, secondly, that the second proviso, even if it be regarded as an independent penal provision, *does not apply to a physician who administers exempt preparations solely to patients whom he personally attends.* Upon reconsideration the Government has withdrawn its first ground of confession of error. We put to one side that question since we are of opinion that there must be a reversal on the second ground.

Assuming, without deciding, that the second proviso of Section 6 is an independent penal provision, it requires that records be kept only by "any manufacturer, producer, compounder, or vendor (including dispensing physicians)." *We think that Congress, by the use of the words "dispensing physicians," meant to exclude physicians administering to patients whom they personally attend.*

That not all physicians are required to keep records is manifest from the use of the qualifying adjective "dispensing." And, the physician must be one who manufactures, produces, compounds, or vends, or possibly only one who vends if the parenthetical phrase applies only to "vendor," the drugs. These are not appropriate words to describe the function of a physician who *administers* exempt preparations to patients whom he personally attends.

This construction is borne out by a consideration of the Act as a whole. The word *"administer"* more appropriately describes the activities of a doctor in personal attendance than does the word "dispense." Admittedly the words "dispense" and "dispensing" are used in several senses in the Act, but Congress evidently was aware of the differentiation between "administer" and "dispense," for, when it wished to include all possible functions of physicians with respect to drug distribution, it used both terms in conjunction. Section 1 of the Act in defining those required to pay a special tax speaks of "physicians . . . lawfully entitled to distribute, dispense, give away, or administer," and makes it unlawful for any person "to purchase, sell, dispense, or distribute" any drugs otherwise than in and from the original stamped package, excepting the "dispensing, or administration, or giving away of any of the aforesaid drugs to a patient" by a practitioner where "dispensed or administered to the patient for legitimate medical purposes."

Section 4 exempts from the prohibition of interstate shipments and deliveries of drugs by persons who have not registered and paid a special tax deliveries by "any person who shall deliver any such drug which has been prescribed or dispensed by a physician." The omission of the word "administer" indicates that Congress recognized that shipments and deliveries would ordinarily not be involved where the physician was administering while in personal attendance.

In Section 2(a), dealing with true narcotics, Congress unequivocally exempted physicians from record keeping where in personal attendance upon patients. *It is difficult to perceive why a different requirement should obtain when a physician, under similar circumstances, administers preparations containing only a limited amount of narcotics,* such as the paregoric, cough syrup, etc., involved in this case. The word "dispense" is evidently used in Section 2(a) in a sense broad enough to include personal administration of drugs by an attending doctor, but the express exception of the personal attendance cases removes any ambiguity as to the scope of "dispense" in this context.

The construction of the parenthetical phrase "(including dispensing physicians)" as encompassing only doctors who would be covered by the word "vendor" does not imply that Congress was tautologic, but rather that it acted cautiously to preclude any contention that physicians selling drugs were not "vendors" because of their professional status.

The legislative history of the second proviso of Section 6 supports the view that the words "dispensing physicians" were intended to apply only to physicians acting as dealers in the sale of drugs. The phrase "vendor (including dispensing physicians)" was substituted for "the dealer who knowingly sells" exempt preparations.

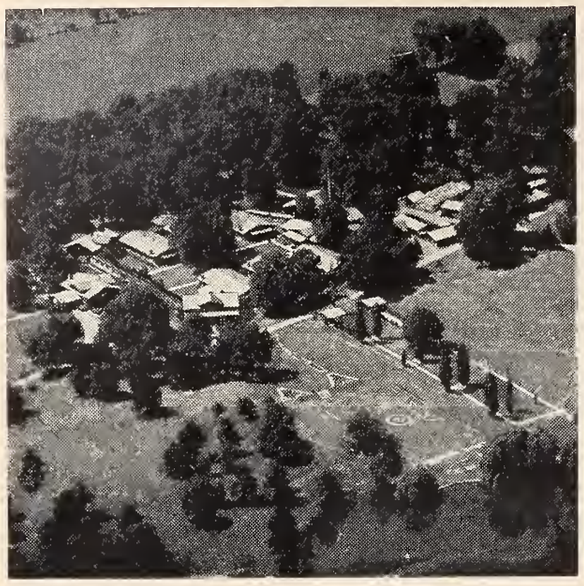
Upon the evidence in this case petitioner was not a "dispensing physician" within the meaning of the second proviso of Section 6. The judgment is reversed and the cause remanded to the United States District Court for the Territory of Hawaii for such further proceedings as may be required in the light of this opinion.

It is so ordered.

YALE POLIOMYELITIS UNIT ESTABLISHED

The National Foundation for Infantile Paralysis announced that the National Foundation had made a five-year grant, totaling $150,000, to the Yale University School of Medicine, New Haven, Connecticut, for the establishment of the Yale Poliomyelitis Study Unit. The term of the grant will conclude June 30, 1948.

The funds which make this and other research projects of the National Foundation possible are con-



Aerial View

The Sawyer Sanatorium offers facilities for the treatment of patients suffering from Nervous Diseases, Mental Disorders, Psychoneuroses, including Involutional Psychoses; Arterio-Sclerotic, Senile and Adolescent Mental Disorders; Paralyses; Cardiac, Cardio-renal and Hypertensive Nervous Conditions; and the various manifestations associated with them.

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tributed each year during the celebration of the President's birthday in January.

Research into the spread of poliomyelitis should continue now more than ever because so many new lines of investigation have opened up and the wartime drain on medical services has left fewer properly trained people to pursue the study of how the disease of poliomyelitis is transmitted.

LECHLER DESCRIBES PRE-HISTORIC DIET

Housewives plagued by the need of devising varied menus in the face of point-rationing and the ever-dwindling stocks on the shelves of the corner-grocery could simplify their tasks considerably by utilizing some of the items eaten by paleolithic man and would still be able to furnish their families with a balanced diet. So says Dr. George Lechler, instructor in anthropology at Wayne University. Whether the squeamish appetites of modern Americans could survive some of the dishes enjoyed by their primitive ancestors is, he admits, a somewhat debatable point.

It is quite possible to reconstruct the diet of ancient man by studying the bones excavated in paleolithic dwelling-places and by examining the eating habits of contemporary primitive peoples.

Such study, he contends, indicates that, while Neanderthal man was partial to bear meat, our more immediate ancestors 100,000 years ago had a more catholic taste and enjoyed mammoth, rhinoceros, bison, reindeer, and horse indiscriminately. And, to prove that they knew facts which modern research has only recently uncovered, he says, they ate not only the choice cuts but organs such as liver and kidneys as well. Furthermore, they drank the blood of the animals they killed and apparently devoured with relish the half-digested contents of reindeer stomachs. Primitive hunters in Siberia still eat this "reindeer spinach," which tests have shown to be exceptionally rich in vitamins.

Succulent leaves and cruciferæ, an order of plants which includes the cabbage, radish, and cress, must have been among the vegetable dishes favored by ancient man as were many bitter plants which were processed by putting them into pits and allowing them to ferment.

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Woman's Auxiliary

Genesee County

The Genesee County Medical Auxiliary held its final meeting Tuesday at the Durant Hotel. Mrs. Arthur Kretchmar conducted the business meeting which followed the luncheon. Reports were made and a discussion was held of future programs.

Gratiot-Isabella-Clare

The tri-county medical society and the auxiliary met at the Park Hotel Thursday evening for a banquet and lecture. Dr. Oliver Lohr of Saginaw was the guest speaker. After dinner the auxiliary ladies enjoyed an evening of bridge at the home of Mrs. R. L. Waggoner.

Ingham County

Forty members of the auxiliary to the Ingham County Medical Society attended a luncheon meeting Monday afternoon in the home of Mrs. Francis Jones, Jr., East Lansing. Mrs. Earl I. Carr reviewed the play, "Margin for Error," by Clare Booth Luce.

Mrs. Charles P. Doyle was appointed to serve as the auxiliary's chairman for the current war bond drive, and the auxiliary voted to purchase a bond.

Mrs. Milton Shaw, president, presided. Reports were given on the sewing projects which the auxiliary conducts for both St. Lawrence and Edward W. Sparrow hospitals, and on the Red Cross war fund drive booth which was manned by auxiliary members.

Mrs. Joseph K. Heckert and Mrs. F. M. Huntley were co-chairmen of the meeting. Centering the luncheon table was a bouquet of calla lilies and other spring flowers encircled by a ring of pastel colored candles shaped like Easter eggs.

The hostess committee included Mrs. E. W. Brubaker, Mrs. W. J. Cameron, Mrs. F. C. Drolett, Mrs. Howard Willson, Mrs. Harry A. Haze, Mrs. Kenneth Johnson and Mrs. R. A. Pinkham.

Kalamazoo

Seventeen members of the Women's Auxiliary to the Kalamazoo Academy of Medicine, enjoyed a coöperative dinner Tuesday evening at the home of Mrs. Homer Stryker. The table was centered with a bowl of green carnations. During the business session, following the dinner, the group voted to donate ten dollars to the Red Cross war fund, after which the remainder of the evening was spent in sewing for the Civic League.

Kent County

Mrs. Carl F. Snapp of Grand Rapids opened her home on Wednesday for the annual tea of the Woman's Auxiliary to the Kent County Medical Society. The Civic Players presented a skit, "The Ancestral Bean." Mrs. G. L. Willoughby, president, gave a short talk on "Activities of the Auxiliary." Presiding at the tea tables which were decorated with spring flowers were: Mrs. William J. Butler, Mrs. Ward Ferguson, Mrs. William A. Hyland, Mrs. Thomas C. Irwin, Mrs. Reuben Maurits and Mrs. A. Wenger.

Manistee County

The Auxiliary held its annual luncheon at the Hotel Chippewa, followed by a short business meeting which was called to order by the president, Mrs. Ernest Miller. Dr. Kathryn M. Bryan addressed the meeting briefly in behalf of the Medical and Surgical Relief Committee of America. The Auxiliary has assembled a loan closet of sick room supplies which is available to all physicians of Manistee County for use by their patients who may have need of them. At the close of the business session the meeting adjourned to the home of Mrs. Miller where surgical dressings were made for Mercy Hospital.

Washtenaw County

A benefit bridge party, open to the public, was given in the Michigan League ballroom, by the Woman's Auxiliary of the Washtenaw Medical Society. The party is an annual event of the auxiliary, given for its scholarship fund for needy medical students in the University. The custom was adjusted to wartime conditions this year, however, and the money raised may be placed in war bonds to build up a fund for use when need arises after the war. The adjustment will be made if the money is not needed next year because of the small number of students remaining in the medical college.

Mrs. Joseph H. Failing was general chairman of the party, and was assisted by Mrs. George Hammond and Mrs. Edwin C. Ganzhorn.

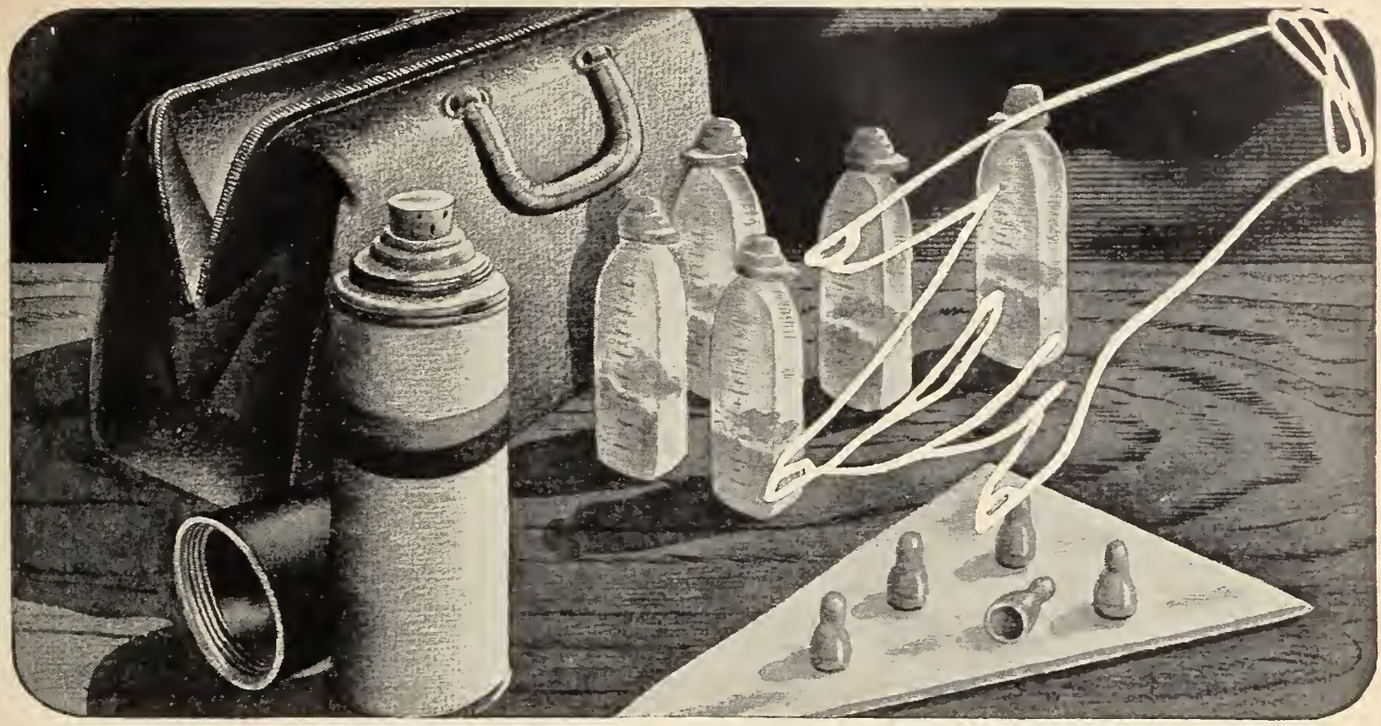
Wayne County

At a regular meeting held on Friday, March 12, the Woman's Auxiliary to the Wayne County Medical Society was honored by the presence of Mrs. G. L. Willoughby, president of the Woman's Auxiliary to the Michigan State Medical Society.

After the business meeting at which Mrs. William G. Mackersie, local president, presided, Mrs. Willoughby was introduced and addressed the assembly. Among the topics which she discussed was the State Auxiliary's participation in the radio speech contest on tuberculosis which she hopes may become a major activity next year. She suggested that newsy letters sent to Army wives would be greatly appreciated and help keep up their interest in the Auxiliary.

"Health for Victory," she told us, was the theme for this year, urged by Mrs. Frank Haggard, national president. To achieve this, Mrs. Willoughby stressed that every effort should be made to create greater unity of Auxiliary through war service, coöperation with the consumers' program, and nutrition, and thus best fulfill our obligation to serve in the interests of the medical profession.

Dr. Raymond C. Miller, chairman of the History Department of Wayne University, speaker for the afternoon program, gave a talk entitled "The American Problem" in which he presented most interestingly various phases of postwar plans.



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MICHIGAN'S DEPARTMENT OF HEALTH

H. ALLEN MOYER, M.D., Commissioner, Lansing, Michigan

INDUSTRIAL EXAMINATIONS UNCOVERING TUBERCULOSIS

Many hitherto unsuspected cases of tuberculosis are being uncovered in routine medical examinations of persons seeking jobs in Michigan war industries. Chest x-ray photographs of 7,775 job seekers presenting themselves at one war plant in recent weeks aided in the detection of 112 cases of tuberculosis or 1.4 per cent of the number of individuals examined. Most of the large employers of labor have been x-raying chests of applicants before hiring in recent years, some since 1936. The Department's mobile x-ray unit has visited nearly 40 smaller plants in the last six months.

ARMY IS MANUFACTURING BIOLOGICS IN STATE LAB

The Medical Department of the United States Army is beginning the manufacture of biologic products—including typhoid vaccine and tetanus toxoid—for the Army, Navy and Coast Guard, on two floors of the recently-completed Groesbeck serum and vaccine laboratory building, newest addition to the state laboratories group of buildings at the northwest edge of Lansing. Lease of the two floors continues in effect for a period of six months after the war emergency is declared ended by the President. The Department's laboratories continue to manufacture biologic products for state distribution and to carry on their other routine services.

POPULATION SHIFTS MAY DISRUPT MEASLES CYCLE

Normal three-year measles cycle in Michigan, with 1944 as the next expected "outbreak year," has been disrupted in the first months of 1943, probably as the result of large-scale shifts of workers from other states to war production centers here. Cases of measles reported through May 7, this year, totaled 14,159 as against a seven-year median of 5,788 for the period.

POLIO STUDY EXTENDED TO JULY 1 BY NEW GRANT

A grant from the National Foundation for Infantile Paralysis, Inc., extends to July 1 a serum study which is part of the poliomyelitis research that is being carried on in the Department's virus laboratory in Lansing. The study is an attempt to learn whether blood serum taken from persons who are immune to the disease may serve as a preventive of poliomyelitis in animals.

PNEUMONIA DEATHS DROP IN MIDDLE AGE BRACKET

Relatively greater reduction in the number of deaths from pneumonia among persons of middle age than among those at the extremes of life is indicated in death certificates received by the Department in recent months. Credited is Michigan's pneumonia control program made possible by legislative appropriations of $50,000 annually since 1941 for purchase and distribution of sulfa drugs and new types of serum, and the adoption of more efficient laboratory procedures.

TETANUS TOXOID MAY BE SUPPLIED IN COMBINATION

If large-scale bombings of Michigan areas are attempted by enemy powers, the state laboratories are ready to furnish tetanus toxoid in combination with other biologic products. Quantity production of tetanus toxoid is under way now. Production and distribution of tetanus antitoxin continues also.

BEET SUGAR WORKERS ARE EXAMINED IN TEXAS

Chest examinations of beet sugar workers seeking employment in Michigan fields this season have been made in Dallas and San Antonio, Texas, in recent weeks by a Department physician, the fifth year that such procedure has been followed. Those workers examined in Department offices in Texas are mostly naturalized Mexicans. The U. S. Public Health Service has similarly examined workers crossing the border from Mexico to the United States.

TYPHOID CARRIER TOTAL FOR MICHIGAN IS NOW 276

Latest count of known typhoid carriers in Michigan is 276, a record number. In all, 411 carriers have been identified since 1932. Some have since died or left the state.

VD CONTROL MEASURES ARE SECURING RESULTS

Indication that wartime venereal disease control measures are getting results is seen in recent increases in cases reported to the Department. Cases of syphilis reported in March totaled 1,373, up 539 from February. Tentative April total was 1,237. Gonorrhea shows lesser comparative gain. Physicians are turning up more cases of infection through routine blood tests. Selective Service and preëmployment examinations in industry uncover others.

AID IS TO BE PROVIDED FOR CIVILIAN CASUALTIES

Commissioner Moyer has been appointed to direct the providing of federal assistance to Michigan civilians who may be injured by enemy acts, or to their dependents. Medical care or hospitalization will be provided for the injured and burial costs not to exceed $100 will be met. Hospital care ordinarily will be limited to 21 days, although extensions of time will be approved when necessary, institutions to be reimbursed

at the rate of $3.75 per day for each such person. Disbursements will be from a $5,000,000 fund allocated by the President "to be expended by the Administrator of the Federal Security Agency, or through such Federal or other agencies as he may designate, for providing temporary aid necessitated by enemy action to civilians, other than enemy aliens, residing in the United States: (1) who are disabled; or (2) who are dependents of civilians who are killed, disabled, interned or reported as missing; or (3) who are otherwise in need of assistance or services. This allocation is not intended to cover civil or other personnel of the Federal Government for whom other provisions are contemplated."

$50,000 IS APPROPRIATED FOR INDUSTRIAL HYGIENE

Legislative appropriation of $50,000 for activities of the industrial hygiene bureau of the Department in the fiscal year beginning July 1 will finance expanded activities. Opening of new branch office is planned, in addition to those now located in Grand Rapids, Saginaw, Pontiac, Ann Arbor and Kalamazoo. If they can be found, two physicians, six engineers and a chemist will be added to the present bureau staff of 12 men.

SUBSIDIES TO COUNTIES FOR TUBERCULOSIS TO BE LARGER

Counties are to get more money from the state for the care of tuberculous patients in the fiscal year beginning July 1, the legislature having made $2,900,000 available for hospital care, $750,000 more than the current appropriation. Present subsidy of $1.50 per day will be upped to $2 and additional subsidies are made available to counties whose tax incomes are too small to cover their share of the cost of hospital care for their tuberculous charges.

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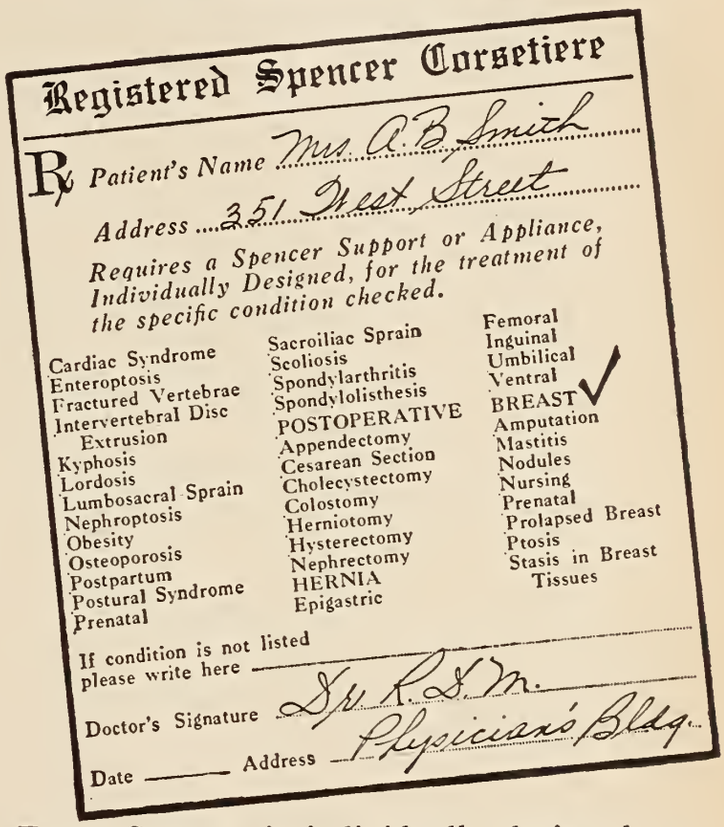
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COUNTY AND PERSONAL ACTIVITIES

The 1943 Michigan Postgraduate Conference on War Medicine—the 78th annual meeting of the State Society—will be held at the Statler Hotel, Detroit, September 22-23-24. The scientific program will be as stellar as in the past.

This concentrated three-day postgraduate course presents an opportunity to the busy practitioner of medicine which cannot be missed. SUGGEST TO YOUR MEMBERS THAT THEY PLAN TO ATTEND THIS MEETING—AND THAT THEY GET THEIR HOTEL RESERVATIONS EARLY.

Cover—Carl Arksey of Lansing is the artist who produced the photograph of Hygeia a la Modern which appears on the cover. The sculpture decorates the new filtration building of the City of Lansing.

* * *

"Easter in War Time" is the title of an excellent editorial written by Ralph H. Pino, M.D., Detroit, which appeared in the *Detroit Medical News* of April 26. Reprints should be made and distributed widely.

Lieutenant Harvey M. Andre, M.C., Office of the Surgeon, Erie Proving Ground, Lacarne, Ohio: "I have missed the MSMS Journal very much and would appreciate your sending me the March, 1943, issue."

* * *

Thomas Francis, Jr., M.D., of Ann Arbor is the author of an original article "Epidemiology of Influenza"; and L. T. Coggeshall, M.D., of Ann Arbor is the contributor of "Malaria as a World Menace," both articles appearing in JAMA for May 1, 1943.

* * *

A new Genesee County Board of Health was organized by the Board of Supervisors April 23, 1943, to replace the "Health Committee." The new Board will consist of five members, one to be elected yearly for a five-year term, which will give continuity to the Board.

* * *

Return Unused Biologic Products Immediately.—Physicians using biologic products are requested to return unused products immediately upon reaching the expiration date. Please do not hold these products in stock as the vials and stoppers are needed by the laboratory.

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Say you saw it in the Journal of the Michigan State Medical Society

A. C. P. in the *Genesee County Bulletin* writes: "The late Dr. Victor C. Vaughan once said during one of his highly dramatic lectures: 'If a yellow dog yaps at your heels, ignore him. But if he so much as nips your heel, turn about, kill him, and proceed with dignity about your business.'"

* * *

Frank Doran, in the *Kent County Bulletin,* states: "The chiros and naturopaths tried unsuccessfully to get some favorable legislation passed in the last session of the State Congress. Medicine, as you and I have known it, will have to stand against more than one assault for several years to come. I think we can."

* * *

Lieut. J. C. Hart, M.C., writes from Iran (old Persia): "It sure was good to get word from the Society, with news of what is going on—medically—back home. Keep them coming!" Lieut. Hart was a practitioner in Detroit. His present mailing address can be obtained from the office of the Executive Secretary in Lansing.

* * *

"Medicine on Guard" is the title of a new feature short film available to county medical societies. It graphically shows the work of the U.S.P.H.S. and how the doctor shortage problem is being solved. For further information, write the U.S.P.H.S., Bethesda, Maryland, or Pathe News, Inc., 65 Madison Avenue, New York.

* * *

H. E. Randall, M.D., and William H. Marshall, M.D., of Flint were elected Councilors of the Tri-State Medical Society at its 70th annual meeting in Ann Arbor, April 12. Frederick F. Yonkman, M.D., of Detroit, was elected Treasurer. H. H. Cummings, M.D., of Ann Arbor, retired as President of the Society, being succeeded by E. Benjamin Gillette, of Toledo, Ohio.

* * *

C. D. Moll, M.D., has been appointed Vice Chairman for Physicians in Michigan, responsible for the Wayne County areas, by Paul V. McNutt, Chairman of the War Manpower Commission, upon recommendation of the Directing Board of the Procurement and Assignment Service.

Congratulations, Chairman Moll.

* * *

Major Sherwood R. Russell, M.C., 7th Genl. Disp., APO 887, New York, N. Y. (formerly St. John's, Michigan): "This new assignment is most interesting—seeing lots of patients and meeting some fine men, our own, British, and Canadians. . . . The MSMS Journal hasn't caught up with me yet, but I read the January copy in the library—here in England—the other day! It was great seeing it."

* * *

Motion Pictures for County Medical Societies.—A generous list of motion pictures on scientific subjects, available to county medical societies on a loan basis, appeared in the April MSMS Journal, pages 250-252-254-256-258. Many of these films are in sound and/or



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color; most are available at no cost; and some few include complimentary use of projector and lantern-man.

During wartime when it is increasingly difficult to procure speakers for medical meetings, county societies will be able to augment their programs by the use of interesting and instructive motion pictures on up-to-date scientific subjects.

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E. R. Squibb & Sons, New York, New York

The above ten firms were among the exhibitors at the 1942 MSMS annual meeting in Grand Rapids and helped make possible for your enjoyment one of the outstanding state medical meetings in the country. Remember your friends when you have need of equipment, medical supplies, appliances or service.

* * *

Short "Proof of Disability" Blank.—Under the stress of war conditions in the practice of medicine, the burden of giving adjustment and investigational information to health insurance companies has become more time-consuming than appears to be necessary to furnish adequate proof of disability.

The Ingham County Medical Society has adopted a "Proof of Disability" blank which is designed as a time-saver for physicians; it specifies that any further information may be obtained by the insurance company for a fee of $2.00. At the Michigan State Medical Society Convention in 1927, this fee was set as a fair charge for the search of records and compiling of information for a medical insurance proof of disability. The Ingham blank may be procured from MSMS, 2020 Olds Tower, Lansing.

* * *

Free Supplement to U.S.P. XII—Notice is hereby given to owners of all copies of the U.S.P. XII to fill in and mail the post card order which is tipped inside the back cover of the U.S.P. XII, and which entitles the holder to a copy of the First U.S.P. XII Bound Supplement soon to be issued. It was not expected that this Supplement would be issued until about two and one-half years after the appearance of the U.S.P. XII, but changing conditions and wartime demands have necessitated its immediate publication. The Supplement itself will carry a similar order form for a Second Bound Supplement, should the latter be required before the appearance of the U.S.P. XIII.

It is expected that the First U.S.P. XII Bound Supplement will be available within two months and when it becomes available immediate shipment will be made without further cost to those who mail in their order cards as directed.

* * *

CONSTITUTION-BY-LAWS' CHANGES CONCERNING DELEGATES

The 1942 MSMS House of Delegates amended Article 4, Section 3 of the Constitution to include the immediate past-president of the State Society as a member at large of the House of Delegates, with the right

to vote and hold office. In addition, all past-presidents now have a right to the floor in the House of Delegates accorded to a regular Delegate, but not the right to vote.

In the By-laws, Section 2 was changed so that a member must be either an active member—or a Member Emeritus—of the State Society for at least two years preceding election as Delegate.

Section 3 was changed as follows: "Any Delegate-elect not present to be seated at the hour of call of the first session may be replaced by an accredited Alternate next on the list as certified by the Secretary of the County Medical Society involved."

Finally, Section 7(n) was amended so that all resolutions introduced into the House shall be in triplicate (not duplicate).

* * *

FORT CUSTER HOSPITAL CLINIC

The staff of the Station Hospital, Fort Custer, is sponsoring an annual clinic day, known as Fort Custer Clinic Day, on Wednesday, June 30, 1943, to which the members of the following County Medical Societies have been invited: Allegan, Barry, Berrien, Branch, Calhoun, Cass, Hillsdale, Ingham, Jackson, Kalamazoo, Kent, Ottawa, St. Joseph, Van Buren. Due to limited facilities for accommodations and gas rationing, it was determined to limit the invitation to the physicians in the counties listed above, all of whom are within seventy-five miles of Fort Custer.

First General Assembly—1:00 P.M.

American Red Cross Building, Station Hospital, Fort Custer

Address of Welcome—Colonel Clyde D. Oatman, Post Surgeon

"Pneumonia and Empyema"—Lt. Col. Frank B. Lusk and Lt. Col. Joseph W. Gale

Medical Section

Arthritis Clinic
Allergy Clinic
Neuropsychiatric Clinic
"Meningitis at the Station Hospital—Report of Twenty-seven Cases"—Capt. John L. Bohan

Surgical Section

Orthopedic Clinic
Plastic Surgery Lecture
Varicose Vein Clinic
Eye Clinic

Second General Assembly

Clinical Pathological Conference
"Two Cases of Pontine Hemorrhage"—Maj. Joseph M. Looney.

Following the Clinic Day, the visiting physicians have been invited to be the guests of the staff of the Station Hospital at a barbecue on the shore of Eagle Lake, just south of the hospital.

Lt. Col. John G. Slevin, M.C.,
Commanding.

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Acknowledgment of all books received will be made in this column and this will be deemed by us as a full compensation of those sending them. A selection will be made for review, as expedient.

DISEASES OF THE NOSE, THROAT AND EAR, MEDICAL AND SURGICAL. By William Lincoln Ballenger, M.D., F.A.C.S., Late Professor and Head of the Department of Otology, Rhinology, and Laryngology, School of Medicine, University of Illinois, Chicago, and Howard Charles Ballenger, M.D., F.A.C.S., Associate Professor of Otolaryngology, Northwestern University, etc. Eighth edition, thoroughly revised. Illustrated with 604 engravings and 27 plates. Philadelphia: Lea and Febiger, 1943. Price $12.00.

Ballenger's text book has now passed through eight editions, and has been a popular reference and text during many years. Advances in the field of oto-rhino-laryngology have been so extensive during the past few years that the author has largely rewritten the book. He has many new illustrations, and has meticulously described and illustrated many of the standard operative and treatment procedures, making the book an excellent one for study by those entering upon the study of the specialty, and also serving as a handy and ready reference by others with years of experience. The illustrations are good and in sufficient number and detail. The chapters on Bronchoscopy have been revised and rewritten by Drs. Gabriel Tucker and C. L. Jackson, and those on the Labyrinth by Dr. Alfred Lewy.

DISEASES OF THE SKIN. By Oliver S. Ormsby, M.D., Rush Professor of Dermatology, University of Illinois, Attending Dermatologist to the Presbyterian Hospital of Chicago, Member of the American Dermatological Association, etc., and Hamilton Montgomery, M.D., M.S., Associate Professor of Dermatology and Syphilology Mayo Foundations for Medical Education and Research, Graduate School, University of Minnesota. Sixth Edition thoroughly revised. With 654 figures, containing 723 illustrations and 6 colored plates. Philadelphia: Lea and Febiger, 1943. Price $14.00.

Several introductory chapters are devoted to microscopic anatomy and physiology of the skin, pathology and therapeutic principles. Every conceivable disease of the skin is described giving synonyms, definition, symptoms, etiology, pathological anatomy, diagnosis, treatment, and prognosis. The discussion is complete with sufficient illustrations.

This is a standard textbook of 1,360 pages well printed and bound, and an ever-ready reference. It will be valuable to students, practitioners and specialists alike. Montgomery has made a significant advance in correlating Ormsby's encyclopedic text with modern medical and pathological knowledge. The consideration of parasitic infestations is more closely the present opinion held by parasitologists than any of the previous dermatological texts.

GYNECOLOGY INCLUDING FEMALE UROLOGY. By Lawrence R. Wharton, Ph.B., M.D., Associate in Gynecology, the Johns Hopkins Medical School; Assistant Attending Gynecologist, The Johns Hopkins Hospital; Consultant in Gynecology, The Union Memorial Hospital, Hospital for the Women of Maryland, Sinai Hospital and Church Home and Infirmary. 444 illustrations; 982 pages. Philadelphia and London: W. H. Saunders Company, 1943. Price $10.00.

This is a new book, very complete, covering the main facts about gynecology in one volume. A new

feature for a book on disease of women is its included section on female urology, a very practical and well-illustrated section. Urologic anatomy and diagnosis, office and hospital treatment, urologic surgery are included.

Considerable space, and many accurate illustrations are given to accepted gynecological surgical principles and operative procedures, standard pelvic surgical procedures being presented in detail along with the excellent drawings and photographs. Dr. Wharton has also stressed features that have to do with the maintenance of health in women, including the prevention and early recognition of gynecologic diseases. Modern endocrine therapy is reviewed in its application to gynecology, and the sections on tumors of the cervix, uterus and ovaries are complete and up to date.

This book will appeal to the medical student as a reference work for its completeness, and will have considerable appeal to the practitioner who does his own pelvic surgery as well as office treatment of diseases of women.

CLINICAL DIAGNOSIS BY LABORATORY METHODS. By James Campbell Todd, Ph.D., M.D., and Arthur Hawley Sanford, A.M., M.D. Tenth edition, thoroughly revised with 380 illustrations, 35 in color. Philadelphia and London: W. B. Saunders Company, 1943. Cloth, Price $6.00

The tenth edition is sufficient proof that this book has endured the 35 years, since its first publication, strictly on its merits. It has become a standard labora-

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GYNECOLOGY—Two Weeks' Intensive Course starting October 18. One-month Personal Course starting August 2. Clinical and Diagnostic Courses.

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tory guide for medical students, technologists and physicians.

Revisions and additions have been made notably in the chapter on serodiagnosis. At the beginning of this chapter a concise practical explanation of the principles involved in the various immune reactions employed in the serodiagnostic tests for syphilis is given. This is followed by detailed outline of the various technical procedures. The Mazzini test has been added to the list of accepted diagnostic laboratory tests for syphilis.

Additions have also been made to the chapter on clinical chemistry, such as the quantitative determinations of the sulfonamides and their derivatives in the blood; serum amylase; serum phosphatase—method of King and Armstrong; the determinations of sodium and potassium content of the blood. For the sake of clarity it appears that each chemical test should be preceded by an explanation of the principles involved, including the chemical reaction when feasible. Few students can intelligently follow the reasons for the various steps involved. Photelometry has been widely accepted and recognized. Only brief discussions of photelometric methods as applied to clinical chemistry is presented. Detailed procedures should be included rather than referring the reader to other publications.

This book should be included in the library of any one who is interested in laboratory procedures and diagnosis.

Vertigo

(Continued from Page 470)

but her nystagmus persisted. The recovery made us suspicious and our suspicions were confirmed about one year later when she returned with identical symptoms referable to the other ear, but no infection preceded this attack.

Conclusion

Vertigo is a symptom often difficult to distinguish from dizziness, and the cause may be only elicited after a thorough history and examination. In a majority of cases, lesions in the middle or inner ear are the cause of the vertigo, and it thus becomes a problem of the otologist to diagnose and treat this symptom.

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WAR BULLETINS

OUR MAD WORLD*

By Malcolm W. Bingay
Editor, *Detroit Free Press*

'Twas the brooding Hamlet who said:
"The time is out of joint: O cursed spite,
That ever I was born to set it right!"

Our world today is filled with feeble Hamlets who do not feel gloomy. They proclaim vociferously the time is out of joint and bless the Lord that they are born to set it right.

You psychiatrists know the types. They can solve the problems of the universe on the back of an envelope any time they are called upon. They never let facts and stark reality interfere with their plans.

* * *

Just before the beginning of the Christian era, Seneca, the Stoic philosopher, wrote: "We are mad, not only individually but nationally. We check manslaughter and isolated murders; but what of war and the much vaunted crime of slaughtering whole peoples?"

Looking about us today, it is hard to believe that the world has improved much since that time. And yet with all the darkness that engulfs us we live in a great hope. There has been a slow but feverish dawning of human intelligence in the last four centuries.

To explain the universe in which we now live, to understand some of its triumphs and some of its madness, we have but to mention Man's explorations in those four hundred years.

First there were such men as Copernicus, Galileo and Newton to explore the heavens and to bring down to Man's use the celestial laws of mechanics which brought about the Machine Age.

Contemporaneous with them were such navigators as Columbus, Magellan and Vasco da Gama to discover vast continents and to chart a new geography.

Out of all this stirring of Man's imagination there came other great explorers in the science of government. They were lovers of liberty such as John Locke, Blackstone, Montesquieu, and Thomas Jefferson. They conceived the idea of life, liberty, and the pursuit of happiness for all people; that, under God, they consented to be governed.

There followed, too, in the field of medicine and chemistry, men like Lavoisier, Pasteur, Koch, Lister, and Ronald Ross to tell of an invisible world they had discovered through their microscopes.

And Man in his egotism viewed all these things and said they were good. Had he not brought light from the farthermost star and at the same time captured and exposed the fiendish spirochete, which heretofore had worked in the darkness of Man's limited vision to speed its madness from generation to generation?

* * *

Yes, man had conquered all things. He had conquered the earth and the seas and the air thereof. He had conquered time and space. By the power of the printed work he would conquer ignorance. At last, he said, he would find the answer to the riddle of the universe.

But it seemed that the more the great explorers discovered for him the unhappier became his lot.

Wars did not become less frequent. Instead, they increased in violence. We used all the gifts of God to make the slaughter a thousandfold more ruthless.

The terrific impact of all this Niagara of immediate knowledge and half-truth has brought upon us a form of intellectual indigestion. Science has poured upon the mind of Man, still emotionally immature, a cataclysm of conflicting thoughts, desires and purposes. Our hearts and minds and souls have not kept pace with the onrush of mechanical and materialistic triumphs.

We have not bred a generation sufficiently educated and disciplined to orient itself to an understanding of this new world.

* * *

You doctors of the mind are the latest galaxy of explorers. You doctors may well be the pioneers in the greatest adventure of all. You are just at the shores of the vast dark continent of the human mind.

You have had such men as Wundt, Broca, Helmholtz, Hughlings-Jackson and your own Adolph Meyer charting the course, with Freud and Adler and Jung contributing. The real science of psychiatry, developing out of psychology, is less than a century old. Already you are making discoveries that may change the course of history, as did your fellow explorers in other fields. Your task shall be to reorient Man back to a world sanity.

This, you cannot do alone. You will need, in cooperation with you, all the other branches of medicine. You will need the chemist and the physicist and the masters of all the other sciences that now seem to be blending into one universal essence.

You will need the tremendous power of a newly created educational system which will teach our coming generations something deeper than selfish desires, something wider than immediate gains; a system of schooling in our colleges and universities where men can hear the whisperings of the truth from the saints and sages of the ages and find poise and peace in a world of culture and understanding.

Above all, you will need the force, or, as you call it, the shock, of a moral renaissance that can come only from the inspired of God.

* * *

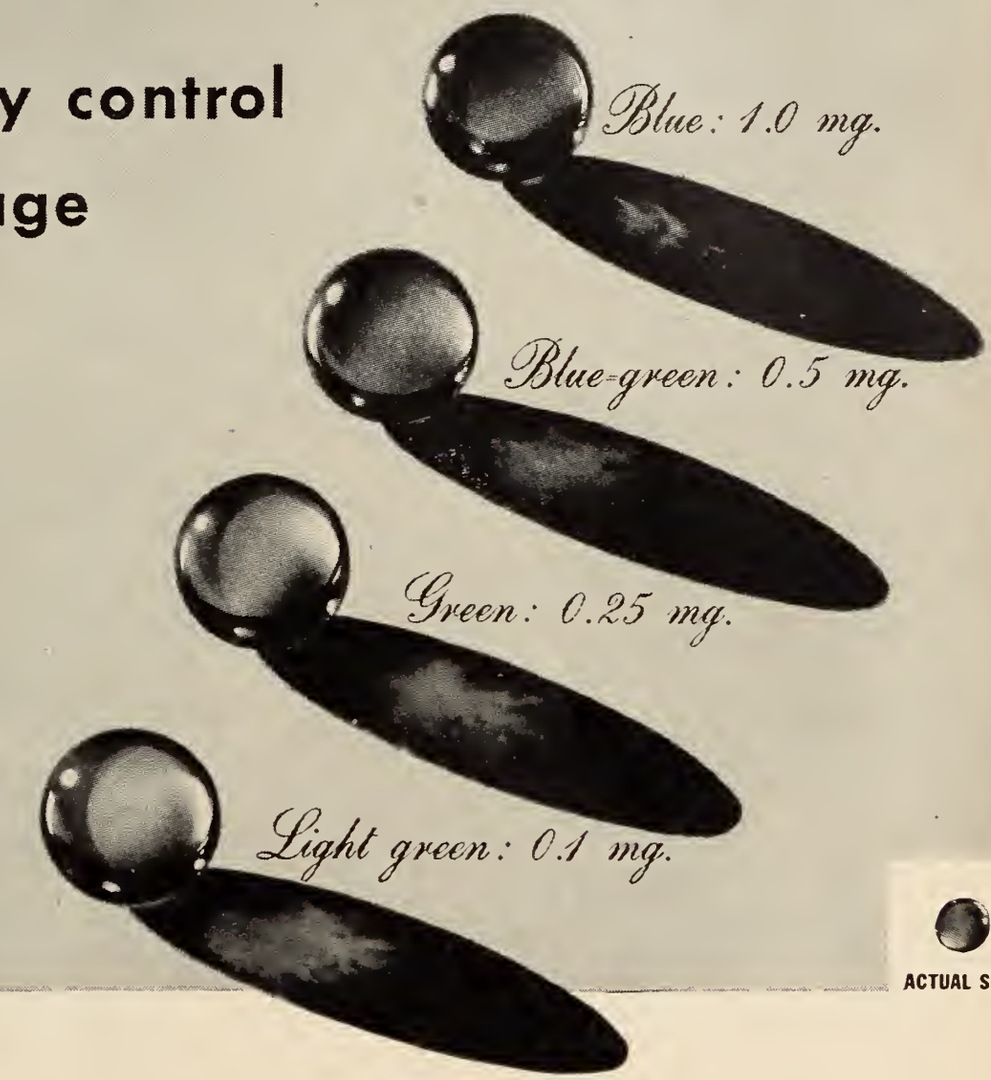
Yes, today, it seems a mad world upon which we

(Continued on page 506)

*Address at National Convention of American Psychiatrists Association at Detroit, May 12, 1943. Copied by permission.

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ANOTHER WAY TO SAVE LIVES . . . BUY WAR BONDS FOR VICTORY

Say you saw it in the Journal of the Michigan State Medical Society

look. But, to a considerable extent, I think the madness is more apparent than real. In these four centuries of which I speak we have built a mighty world machine, a vast machine made up of steel and copper and electricity and chemical compounds; a machine with a nervous system which covers the whole face of the earth with immediate communication; a machine of finance and trade; and a machine of blood and bone and human hearts and heads and souls—all cogs in the one universal mechanism.

The scientists have done all this for us. But, just as we seem to get it running fairly well it cracks up. That means we go to war. The reason for this is that we have done everything but find men who know how to run it.

The manufacturer of a highly complicated airplane would not think of placing it in the hands of a man who knew nothing about aviation. But this global machine, the earth itself, we place in the hands of men not much better trained. We place our lives, and all that we hold near and dear, in the hands of politicians who know very little about history, sociology, economics, science or government.

It is not their fault. They are good men—most of them. They just have not had the training and they know not what they do.

There is not a doctor in this room who has not spent at least 20 years learning something about the science of medicine. The law requires that. We find much the same situation in law, in engineering, in teaching. Professional men and women have to submit to rigid examinations before they are allowed to accept the responsibility of their callings.

And not only professional men! Policemen, firemen, motormen, taxi drivers, barbers, beauty parlor operators, bartenders—what will you. Each must take an examination for intelligence and stability of character before being allowed to earn a living in his chosen field of endeavor.

But we ask nothing of the politician, the man in whose hands we place the destiny of the world.

* * *

Let us say he is a successful butcher, a gregarious extrovert who belongs to many fraternal orders and loves to kiss the babies. We make him mayor without ever asking him what he knows about the science of government, sociology, education, finance. All we say is, "Joe's a good fellow" and that's the end o' it. And by the same system we elect congressmen and senators and governors and even Presidents. We are getting so we almost determine a candidate's eligibility for office by giving him a radio audition.

We just "guess" that he will be all right because he appeals to our ears and our emotions. No, he has never had any executive training but he really doesn't need any. He is like the fellow who did not know whether he could play the violin because he had never tried.

But the time is coming when the American people will be educated out of this hit and miss selection of candidates based on hero worship.

Some day there will come a generation sufficiently wise to pass a very simple law which will make it mandatory that before a man submits himself for public office he pass an intelligence test based on standard qualifications for the office he seeks. More, we will have a disinterested, and non-political, board of psychiatrists examine him to determine his stability of character and his capacity for leadership.

Progressive private business everywhere is making such demands upon its executives, why not in politics?

* * *

As the astrologers were to astronomy and the alchemists were to chemistry the politician is to government. Democracy is too new a thing for men to be trained scientifically in the art of it.

It is one of the problems you physicians of the mind must help solve in the development of an intelligent and alert electorate. Without a solution, it remains the greatest danger to free government in the world today.

As Man's enlightenment continues he will learn, last of all, to conquer himself. He will learn that selfishness and greed are but millstones around his neck; that his only joy will be service to his fellows, in the intelligent selfishness of sound coöperation through which alone will come peace with understanding.

To that mighty task you men of medicine are dedicated in the searching of his mind, the last unexplored continent. With you must stand the educators, the religious leaders, the lawyers and engineers, the social workers, the journalists and men and women of good will and high purpose in every walk of life.

Through this unity of effort alone can be brought about the salvation of Man where always the Mind is Master.

DOCTORS' GREAT SERVICE

Those who are disposed to complain because the army and navy are taking so many doctors away from civilian practice will probably reverse their thinking when they realize the great service the absentees are rendering the defenders of their country.

Reports from the front say that about 97 per cent of the wounded recover, and most of them eventually are able to return to active duty. All due to excellent medical and surgical care. In former wars death rates among the casualties have run as high as 70 per cent, with a great proportion of permanent disability among the survivors.

Our health at home may suffer a little, but we can well afford to make the sacrifice for the benefit of those who fall on the battlefield.—*Bay City Times,* May 23, 1943.

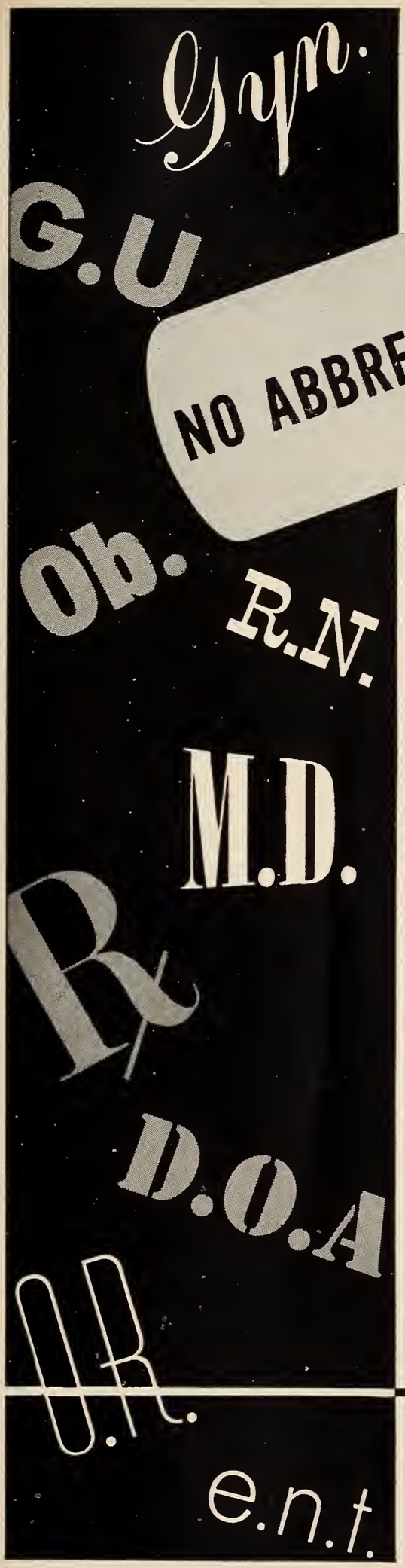
* * *

WAR DEBTS

The Federal Funded Debt rapidly moves upward. May 7 it was $135 billion compared to $61 billion November 30, 1941, only a few days before our declaration of war. Present schedule calls for this debt to top $210 billion June 30, 1944.

The United Kingdom (British) Gross Debt on March 31 was $36 billion. After approximately three and

(Continued on Page 508)



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one-half years of war this debt had advanced to *only* $67 billion—an increase of $31 billion: While our government debt, direct and guaranteed, advanced $74.5 billion the first *eighteen months* we were in war. It is evident to any student of our fiscal policy and planned economy that England is doing a grander job at financing her war than we are.—Congressman Fred S. Crawford.

* * *

U. S. SAVING MOST WOUNDED OWI REPORTS

More than 97 per cent of the Navy men and Marines wounded at Pearl Harbor have survived, the Office of War Information reported today.

"The wounded don't die" was the theme of an exhaustive OWI report on the treatment of United States Army and Navy casualties. Its findings were summed up in these words:

"Never before in the history of the world has the fighting man had available the medical care and equipment the United States now furnishes its defenders."

Of all the Naval and Marine personnel listed as wounded at Pearl Harbor only 2.6 per cent died subsequently, OWI said, 53 per cent had returned to duty by March 31, 1943, while 43.5 per cent were still under treatment and 9/10 of 1 per cent were invalided from service.

Figures for Army wounded were not available, but OWI said obtainable data showed that "recoveries are comparable to Naval and Marine percentages."

"In the original occupation of North Africa, the only deaths were those of men killed outright or so badly wounded that nothing could have saved them," the report said. "This was true also in other theaters of war."—Associated Press release, Washington, D. C., May 29, 1943.

* * *

PERSONAL ITEMS

Captain Frank D. Richards, M.C., had the distinction of being listed twice in the recent Roster of Michigan Physicians in Military Service. Dr. Richards formerly practiced in DeWitt (Clinton County) but being much nearer to Lansing (Ingham County) he was granted permission to join the Ingham County Medical Society. Both Clinton and Ingham County Medical Societies claimed Captain Richards as their own!

* * *

Captain Herman Diskin, M.C. (formerly of Detroit), was awarded the Legion of Merit for exceptionally meritorious service in combat on Guadalcanal. The award was made on May 11 at the direction of President Roosevelt.

Captain Diskin was commanding officer of a company responsible for the evacuation of casualties of an infantry regiment. He made a personal reconnaissance through enemy-held territory to establish a route of evacuation which proved to be a prime factor in the swift evacuation of casualties to the rear during a subsequent advance of the regiment.

* * *

Captain Charles E. Osborne, M.C., USA (formerly of Vicksburg), is a prisoner of the Japanese government, according to an official announcement made May 16. Previously, Captain Osborne had been reported missing in action at Bataan where he was stationed at the Base Hospital.

* * *

Lt. Col. Theodore P. Vander Zalm, M.C. (formerly of Lansing) writes: "From my place across the Pacific I have received most of M.S.M.S. JOURNALS, but some have gone many miles out of the way to get to me. Just got the February number, here in Australia, on April 26. Thanks for keeping up with me. I'll notify you of each move and change of station."

* * *

The Association of Military Surgeons will hold its 51st Convention in Philadelphia at the Bellevue-Stratford Hotel, October 21-23, 1943.

COUNTY MEDICAL SOCIETY MEETINGS

Bay—May 26, 1943—Wenonah Hotel—Speaker: Donald Durman, M.D.; Subject: "Foot Troubles."

Chippewa-Mackinac—May 24, 1943—Refresher Meeting—Speakers and Subjects: Richard H. Freyberg, M.D., "The Differential Diagnosis and Management of Nephritis." Howard H. Cummings, M.D., "Recent Advances in Obstetrics." Ernest H. Watson, M.D., "Recent Advances in Immunization Procedures." Panel Discussion on "The Diagnostic Significance of Pain," participants: Richard H. Freyberg, M.D., Ernest H. Watson, M.D., Howard H. Cummings, M.D., and Carl A. Moyer, M.D.

Dickinson-Iron—May 6, 1943—Iron River—The Scientific Program was in charge of A. Witkow, M.D., who presented Mr. W. W. Bougher, Inspector for the Bureau of Foods and Standards of the Michigan Department of Health. Following this presentation was a showing of the film "Twixt the Cup and the Lip."

Ionia-Montcalm—June 8, 1943—Lakeview—Speaker: G. J. Stuart, M.D., who spoke on "Psychiatry."

Jackson—May 18, 1943—Hotel Hayes—Speaker: H. Marvin Pollard, M.D., Subject: "Chronic Indigestion."

Kalamazoo—May 18, 1943—Public Library Bldg.—Speaker: Claire LeRoy Straith, M.D., whose subject was "Plastic Surgery Principles Applied to Civilian and Military Surgery."

Marquette-Alger—May 24-28, 1943—Extramural Course—Speakers and Subjects: Richard H. Freyberg, M.D., "The Differential Diagnosis and Management of Nephritis." Howard H. Cummings, M.D., "Recent Advances in Obstetrics." Ernest H. Watson, M.D., "Recent Advances in Immunization Procedures." Carl A. Moyer, M.D., spoke on "The Indications For and Use of Plasma Transfusions."

Oakland—June 2, 1943—Kingsley Inn—Speaker: Russell Alles, M.D., Subject: "Recent Advances in Obstetrics, Including Caudal Anesthesia."

Sanilac—May 13, 1943—Hotel McDonald—Purpose of meeting was to consider the plan for medical care of wives and infants of enlisted men in the armed forces.

Washtenaw—May 11, 1943—Regular Meeting. A resolution was adopted by the Society relative to the death of one of its members, Norman R. Kretzschmer, M.D. The Society expresses its sincere sympathy to his family.

* * *

COUNCIL AND COMMITTEE MEETINGS

May 19, 1943—Medical Preparedness Committee, Statler, Detroit

May 21, 1943—Sub-Committee of Child Welfare Committee, State Health Laboratory, Lansing

June 16, 1943—Executive Committee of The Council, Statler, Detroit



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READING NOTICES

MORE HELP FOR MILK-ALLERGIC PATIENTS

Appetizing and nutritious recipes for using Mull-Soy in milk-free diets are now available in a new publication of Borden's Prescription Products Division. Already widely prescribed as a hypoallergenic substitute for milk in infant formulas, Mull-Soy is now proving equally useful in diets of older infants, children and adults who are allergic to milk.

These Mull-Soy recipe folders are designed for distribution by physicians to their patients. Any desired number of copies may be obtained by writing to Borden's Prescription Products Division, Department CB, 350 Madison Avenue, New York 17, N. Y.

RUMORS THAT PABLUM IS OFF THE MARKET ARE FALSE

Pabena, the new Pablum-like precooked oat cereal, does not replace Pablum. Pabena is now being marketed in addition to Pablum.

Pabena offers substantially all of the nutritional qualities of Pablum and all of its advantages of ease of preparation, convenience and economy. The base of Pabena is oatmeal (85 per cent) which gives it a fine flavor and offers variety to the diet.

Would you like some of both for use in your own family?

Mead, Johnson & Company, Evansville, Ind., U.S.A.

GENITO-URINARY TRACT ANATOMY FOR THE PATIENT

A new booklet "Genito-Urinary Tract Anatomy For The Patient" has been issued by the Medical Research Division of the Schering Corporation. This sequel to the popular "Pelvic Anatomy For The Patient," presents a series of medical drawings illustrating normal and abnormal conditions of the male and female urinary tract.

The illustrations were especially prepared as time-saving devices to aid the physician in explaining disorders and treatment to his patients. The booklet may be obtained by writing to the Medical Research Division, Schering Corporation, Bloomfield, N. J.

SQUIBB'S ARMY-NAVY "E" AWARD RENEWED FOR ANOTHER SIX MONTHS

A star has been added to the Army-Navy "E" pennants which fly over the New York office and the Brooklyn and New Brunswick, N. J., laboratories of E. R. Squibb & Sons. This is the outward symbol of the renewal for another six months of the "E" award first granted to Squibb in September, 1942.

Approximately one-half of the entire Squibb output now goes to the armed forces or lend-lease, and includes hundreds of products—from Dental Cream to Typhus Vaccine. Many departments are working around the clock to insure adequate supplies for both military and civilian needs, for Squibb men and women are determined to keep their "E" pennants flying, and to add a star at regular six-month intervals.

FREDERICK J. STEARNS HEADS DETROIT'S BLOOD DONOR COMMITTEE

Chairman of the Detroit Blood Donor Volunteer Service Committee is Frederick S. Stearns, who is also chairman of the board of Frederick Stearns & Company, 88-year old Detroit drug manufacturing concern.

Mr. Stearns assumed the chairmanship of the Detroit Blood Donor Station in January, 1942, and thirteen months later the Army and Navy reports of blood receipts ranked the motor metropolis as second only to New York.

By mid-April the total number of blood donors in the Detroit area had reached 162,153, which means that allowing for those unable to meet the medical qualifications of donors, upwards of 200,000 had volunteered.

Chairman Stearns credits the enviable showing to the application of a merchandising principle essential to any successful selling enterprise: Correct treatment of the "customer" so that he keeps coming back. Of the 21,000 donors in March, more than 9,000 were "repeaters." In one period, 65 per cent of all donors had volunteered one or more times previously.

RESEARCHER ON ATABRINE IS HONORED

An honorary degree of Doctor of Science has been awarded by St. Lawrence University to Dr. Alfred Einar Sherndal, plant superintendent of Winthrop Chemical Company, for his research work in making possible the synthesis and manufacture of Atabrine, synthetic substitute for quinine in the treatment of malaria, entirely from raw materials available in the United States.

TETANUS IMMUNIZATION OF MILITARY PERSONNEL

All military personnel on induction are being immunized against tetanus either, as in the Army, by three injections of fluid toxoid, or as in the Navy and Marine Corps, by two injections of alum precipitated toxoid (New England J. Med., 227:162, 1942). In addition a small or stimulating dose is injected prior to departure for a theater of operations and an emergency dose is given to those wounded or burned in battle or incurring other wounds likely to be contaminated with *Clostridium tetani.* According to recent report (Am. J. Pub. Health, 33:53, 1943), since June, 1941, when the present tetanus immunization program was adopted, there have been but four cases reported from the entire Army, and none of these was in immunized individuals. Although perhaps too early in the present war to draw any conclusions, it is of particular interest that no cases of tetanus have been reported from battle casualties.

For civilian use, especially in children, it is of decided advantage to accomplish simultaneous immunization against tetanus and diphtheria. Combined Diphtheria Toxoid-Tetanus Toxoid, Alum Precipitated, Lilly, is designed for prophylaxis only, affords effective immunity against both diseases, and avoids risk of serum sensitization which may follow use of an antitoxin.

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Prognosis After Injury or Infection of the Nervous System in Childhood*

By Bronson Crothers, M.D.
Boston, Massachusetts



A.B., 1905, and M.D., 1910, Harvard University, Assistant Professor Pediatrics, Harvard Medical School, Member American Medical Association, etc., American Pediatric Society, American Neurological Association, etc. Author of "A Pediatrician in Search of Mental Hygiene" and various papers in neurological and pediatric journals.

Recovery after injury or infections of young children is difficult to define unless growth and development are taken into consideration. This is particularly true if attention is given to the nervous system. It is obvious that recovery is inadequate if mere restitution to a previously attained status is achieved. The process cannot be regarded as complete until evidence is available which indicates that the child is going along a developmental road which leads to orderly and effective education and eventual general adequacy.

Any attempt to carry out investigation of this sort demands patience and assistance from skilled psychologists and social workers. The implications of such a study, however, are relatively clear and perhaps useful.

The major value of the approach is related to the medical and educational management of children during the months or even years which may elapse before a durable prognosis can be made.

■ Accurate prognosis after injury or disease of the nervous system in children is always difficult and sometimes impossible. Certainly the pediatric training is highly relevant and should be more useful than it is at present. The confusion that exists is due to various factors. In the first place the conventional training of most neurologists makes them effective in dealing with adults, but relatively insecure in dealing with children. Much of the material which we need to discuss falls under transient supervision by neurological surgeons and orthopedists so that continuity of supervision by one man is infrequent.

The pediatrician, in theory, believes that he is able to act as a general practitioner for an age group, but the very fact that he is at the same time a certificated specialist makes him diffident about asserting his right to control if other certificated specialists invade his territory.

Thus he tends to accept the methods used by various groups as the only relevant ones and has a certain amount of insecurity about developing neurological and psychological techniques and attitudes of his own. The first necessity, as I see it, is to find out what we, as pediatricians, can use of the numerous techniques which are offered.

For the purpose of this paper I am not discussing the diagnosis of acute neurological conditions nor am I interested in the degenerative disorders. The group of cases that seem to me relevant consists of the numerous children whose nervous systems have been injured by trauma, by infections or by certain poisons like lead.

In a general way we ought to attempt to develop a method which will give us the following information at the time the acute episode has subsided.

1. The anatomical deficit.
2. The physiological and psychological status.
3. The probable effect of the lesion upon orderly growth and development.

In this connection the pediatrician must make himself sufficiently familiar with development studies from the psychological point of view to justify some effective attitude towards mental testing. Certainly he cannot accept psychometric evaluations as infallible.

*Read at the Seventy-seventh Annual Meeting of the Michigan State Medical Society at Grand Rapids, September 25, 1942.

The point of view that strikes me as acceptable is as follows: Development in the run of the mill of children is an orderly continuous process. Admittedly there are many variations which have no predictive value. Admittedly, also the child development institutes are able to show that extraordinary variations of rate may occur in individuals without known handicap. On the other hand there is a comforting uniformity in essentials in the year-by-year mental development of undamaged children.

The first step, therefore, is to establish a reasonable presumption that the child, before the injury, was normal. Obviously the earlier the injury the less the data, but even in birth trauma there may be presumptive normal antenatal development. The sooner the developmental history is taken the better. Naturally one does not try to collect information while admitting and starting treatment after accidents or during the height of encephalitis, but before discharge a developmental history can be obtained.

In an infant we may have to judge some things by indirect evidence. Brothers and sisters may be useful as controls. The conservative use of the evidence at this time may justify the assumption that the child had average capacity and that prediction of average development is justified. In an older child it may well be evident that superior or inferior development is to be expected.

If an adequate amount of information is available we have a useful standard against which progress can be charted.

It then becomes reasonable to use this curve of prediction to identify various stages. First, it is possible, in most cases, to recognize that the child is reaching the level previously achieved. In hospital records and often in the minds of teachers and parents this stage is assumed to represent recovery.

A second stage is also recognizable. The slow addition of items of advance may suggest progressive but incomplete convalescence. It is evident that convalescence may be a matter not of months but of years.

Finally, in favorable cases a steady progress along the predicted curve may be indicated. This alone is evidence of recovery as it should be defined in childhood.

Obviously all sorts of other methods of appraisal are available. There is some value in trying to deal with prognosis on the basis of diagnosis. It is clear that the correct diagnosis settles the prognosis in a whole series of reliable degenerative syndromes. For instance, children with Tay-Sachs disease always die in infancy, pseudohypertrophic dystrophy runs a relentlessly progressive course and so on.

A few nondegenerative diseases have almost equally disastrous courses. For example, lead poisoning of any severity is so likely to damage the brain irreparably that only long observation justifies the suggestion that recovery is complete. Studies by Dr. Elizabeth Lord and Dr. Randolph Byers from our hospital indicate that a relatively small proportion of the children who suffer from lead poisoning in early childhood reach the school system and that less than ten per cent who do reach this level can be regarded as adequate.

A peculiar situation seems to exist in infantile paralysis. Here irreversible lesions in the final motor cells are frequent whereas the changes in other cells of the nervous system are reversible.

It is possible, I believe, to collect data on a series of infectious diseases with considerable profit. For instance, there is certainly enough information available to justify optimism after mumps with cerebral manifestations, uncertainty after comparable involvement during measles and considerable pessimism if serious encephalopathy occurs during whooping cough. It is, however, quite evident that etiological diagnosis is a treacherous guide to prognosis.

If we are going to develop a plan of observation which fits the pediatric situation, we ought, I believe, to adopt one which is not too complicated, but at the same time is sufficiently elaborate to be useful.

Obviously if the anterior horn cell, its projection fibers or the muscle fibers are out of commission we get absence of function. This is paraphrased as flaccidity but absence of function seems to me a better term. The physiological situation can then be appraised by the simple process of subtraction. I am certain that those of us who heard the symposium on infantile paralysis this morning know the pitfalls in accepting too simple a formula, but certainly the loss of final units is relatively simple.

Any lesion of other pathways, in the presence of intact final units introduces the element of confused control. If the loss is sensory we get the ataxic phenomena, if cerebellar, more complicated disorders. If the basal ganglia are involved the

associated movements are upset. Lesions interrupting cortico-spinal tracts prevent orderly voluntary activities.

The point which I believe should be emphasized is that the simple procedure of arriving at a physiological appraisal by subtraction which is adequate as long as we are dealing with comparable units of final common paths, breaks down when we attempt to deal with cerebral lesions.

If we use some formula which lets us deal competently with cerebral involvement, from the standpoint of motor control we can talk intelligently about the physiological residue. Then we begin to lay a foundation for management.

The next step is to estimate the intellectual capacity of the child. Here we need the help of psychologists who can use psychometric techniques in the presence of physiological disturbances. The most dangerous helper is the psychometric tester without experience with children with cerebral lesions. With an adequate psychological study we can get a reasonable appraisal.

Next we need to know enough about the economic and emotional assets of the family to make a shrewd guess about the degree of competence which will be available in organizing education.

With some such appraisal we ought to consider the usefulness or lack of usefulness of some of the more elaborate methods of investigation. Electroencephalography is of value if any question of convulsions is raised but otherwise I have not been impressed with its value in establishing prognosis.

Pneumoencephalography is a procedure of definite severity. The evidence is tangible and often extremely useful, but I would like to make two very emphatic statements. First, there is no constant relationship between brain mass and disability and second, all that the encephalogram can show is the state of gross brain mass at the time of the examination. In infants the possibility of recovery of growth needs to be considered and, in any case, during, or shortly after acute disease the films may suggest permanent impairment, which is disproved by later films.

With all the information obtainable we are left with merely an appraisal as of the date of study. We now have to chart changes against the expected rate of advance.

For our purposes a straight ascending line showing advance year by year is reasonably satisfactory.

Using this method, but also recognizing that it is an incomplete method, we can show a whole series of events. The children fall roughly into a few groups.

1. Where the level at the time of injury is never reached no one questions bankruptcy. The only warning, which is almost unnecessary, is to wait for months before admitting defeat.
2. A number of children reach, but do not get beyond the achieved level. These are the cases that confuse the literature.
3. Cases with prolonged course, irregular psychometric tests and eventual stabilization at a satisfactory rate of development. The word, convalescence, needs to be defined in pediatric terms just as recovery needs special definition.
4. Certain cases show true recovery.

The problems that arise are largely attackable if time and growth are properly considered.

With this general attitude it is interesting to see how things work out and by a combination of case reports and moving pictures a few points can be made clear.

Case 1.—This patient is now a girl of eleven years. When she first came to the hospital at the age of one year she was in the acute stage of pneumococcus meningitis. The course of the disease was complicated by abscess of the brain. In spite of everything she made an astonishing and prompt physical recovery. However, she was difficult to handle and had occasional convulsions. An excellent clinic decided that her intellectual capacity was hopelessly impaired and institutional care was arranged in eary childhood.

This solution was not acceptable for two reasons: First, the child's intellectual status was reasonably adequate with an intelligence quotient of 80 so that the institutional physicians did not feel sure that she was properly placed among feeble-minded children and second, the warm-hearted family did not accept the solution. In any case she left the institution.

We next heard of her at eight years when her behavior was found to create difficulties at home. In view of the history we did another encephalogram and found almost complete restoration of brain mass. No important deviations were found on physical examination and her psychological tests showed an intelligence quotient of approximately 80.

In the four years since she left the ward at eight years this child has had a rather complicated life. At one stage she twice picked up unknown infants and took them home with her. Naturally this unexpected display of interest created difficulties in which the police were involved. She and her family, however, were relatively serene and deviations from socially acceptable behavior ceased. She is now going along in special class in school with considerable concessions and mak-

ing no trouble at home though her judgment is still defective.

This series of events is, of course, unusual, but it is interesting to note how confused a series of competent physicians were. Apparently convalescence, in this case, extended over many years. Now, to the best of our present knowledge, the child is progressing with irregularities of development, rather than general mental defect.

Case 2.—This girl, now seventeen years old, was first admitted to the hospital at five years with polyneuritis due to lead. The history suggested that ingestion of paint had gone on for at least two years and that various signs of lead poisoning had been misinterpreted by various doctors for about that time.

At this time her outstanding difficulty was motor weakness.

She recovered entirely from the motor weakness. When, after an interval of several years she seemed well and x-rays showed no evidence of lead, she was regarded as cured.

When she was ten years old she was brought to our attention because of difficulties in school. In part these were due to intellectual difficulties and in part they represented emotional distress. She was readmitted and found to be suffering from recurrence of lead poisoning with stippled cells and a significant amount of lead in the blood by spectroscopic analysis. At this time irregularities were shown on psychological examination and definite, though minor signs of involvement of the nervous system, were elicited on physical examination. For example, the child had Babinski reactions and hyperactive knee jerks. A pneumoencephalogram showed no gross change in brain mass.

When the psychological data were discussed with the school suitable concessions were made and all the difficulties at school subsided.

Now at seventeen she is completing her work in the grades and is a vigorous, friendly and competent girl. Her academic progress has been below the level which might have been predicted for her, but she has come through cheerfully.

It is difficult in this case to make a clear statement but certain presumptions are justified.

1. In spite of the fact that the major early signs pointed only to the final common paths, it is likely that the brain was involved from the start.

2. The psychological deviations which led to frustration at school were almost certainly due to cerebral damage, but there is nothing to prove whether the damage was of long standing or whether it was due to an acute encephalopathy due to renewed presence of lead in the blood.

3. In any event this case shows how confusing prognosis can be in the presence of poison like lead which can offer a continuing threat.

Case 3.—This girl was involved in an automobile accident at eight years. The intelligent parents were able to give a clear history of development before the accident, and accessory evidence was available. For instance, she carried with her the homework which she intended to do during a short vacation and she had led her group in writing and performing a play.

Following the accident she was comatose for months and then slowly improved. When I first saw her a year later she had a curious type of cerebral palsy with athetosis and tremor on the right and spasticity on the left. Her speech was hesitant, but intelligible and she was entirely oriented. Her intelligence quotient was about 100. She had various visual difficulties.

An able neurologist, on this evidence, suggested that she had no mental deficit.

During the next year she improved in motor control and she could read large print. She did not show any ability to carry through intellectual work on the level which she had attained before the accident. When she left our continuous supervision two years after the accident we regarded her as still convalescent and urged the family to make all needed concessions.

The family then consulted a psychologist, familiar with children, but not familiar with neurological disease. The appraisal there was quite different. The feeling of this adviser was that efforts should be made to force the child to become independent. Since the serious visual disturbance was a barrier the suggestion was made that the child should learn Braille.

The suggestion seemed invalid to the family and absurd to those of us who had watched the child. Certainly in the presence of gross motor and sensory disorders the child would have had great difficulty from a physiological point of view and the emotional pressure would have been intense.

From our point of view the child is so handicapped that no effort should be made to force competitive living for the present. The confusion among advisers which exists seems to be due to failure to agree on definitions of convalescence and to varying degrees of awareness of the pitfalls facing psychologists, in the presence of cerebral damage.

Case 4.—The last case is a boy, now eighteen years old. He was delivered by one of the leading obstetricians of a large city by forceps. On the second day he was stiff and twitching and was seen by a pediatrician who watched him carefully for a week. At the end of that time no definite neurological deviations were noted. Some anxiety was felt but no definite diagnosis was made.

He held up his head at eight months, sat alone at fifteen months, walked at twenty-one months and began to talk at twenty-two months.

When he was first seen at the Children's Hospital he presented the typical picture of cerebral palsy of the extrapyramidal type.

During his first stay in the hospital, he impressed everyone as a friendly, responsive child with gross motor difficulties. Intellectually he presented evidence of irregularity rather than of mental defect.

The intelligent parents have managed to bring him up with entirely adequate sisters and brothers and had been able to cope with school work in various resourceful ways until adolescence was well on its way.

Then the question of vigorous competitive schooling

arose. The reappraisal of this child at seventeen was interesting and important.

First, like most of the children with severe extrapyramidal palsy he had not profited, to any useful extent, from any type of physiotherapy. Obviously the question of whether physiotherapists had been given a fair chance could be discussed endlessly, but it seems clear that the parents and the child would have persisted with any plan, if results had been obvious.

Second, although the motor difficulties had not increased, they were emotionally more upsetting in a grown individual than in a small child.

Third, the intellectual status, though consistent with some academic progress, was not adequate for competitive work at a high school level.

Finally, the boy himself accepts, at least verbally, the idea of limited objectives and is now leading a protected life on a farm. Emotionally the situation still has its difficulties, but, at least, medical advice has been consistent and the family has always been aware of the psychological information which has been available.

Conclusions

The real problem is to find a method of using clinical evidence in relation to growth and development in children. Obviously mere appraisal of deficit is not enough. What the family and the school need is an appraisal of assets. The pediatrician, should, I think, attempt to organize his material so that his diagnostic statements can be used by teachers and parents and so that his prognostic statements will also have value for teachers and parents. Ways of doing this are suggested in this paper.

MSMS

Low back pain, even with sciatica, is not always due to pathological conditions incurrent in the spine itself. There are many anatomic and constitutional factors which may be responsible for the condition.—Harry E. Mock, *Wisconsin Medical Journal,* April, 1943.

* * *

One of the radio soap operas Monday morning, May 17, dramatized the rationing of doctors as a great achievement. Doctors' calls were all collected by some administrator, some patients were sent to one doctor, some to others, no attention being given to the doctor of choice. Home and office calls were parcelled out, and in the "skit" the doctor seemed to like it. Another piece of propaganda?

Carcinoma of the Larynx*

By D. F. Weaver, M.D.

Detroit, Michigan



University of Virginia Medical School, 1932; Associate Surgeon Division of Otolaryngology, Henry Ford Hospital; Member, Detroit Otolaryngological Society, Academy of Ophthalmology and Otolaryngology; Diplomat of the American Board of Otolaryngology; Member, Michigan State Medical Society.

Since the advent of modern methods in treating carcinoma of the larynx, laryngologists have shown that the disease is curable in a high percentage of cases, especially when diagnosed and treated reasonably early. A number of cases still remain unrecognized and untreated until the best chance of cure has been lost.

Since hoarseness is frequently the only symptom of carcinoma of the larynx until late in the course of the disease, it is suggested that any person who remains hoarse for more than a few weeks should have a laryngeal examination.

Cases are reported illustrating the general types of surgical procedure that are used.

■ In spite of the excellent results that have been reported from the surgical treatment of carcinoma of the larynx and in spite of the publicity that has been given to cancer in general by the lay press, a fair number of cases still remain unrecognized and untreated until the best chance of cure has been lost due to metastasis or local extension of the growth.

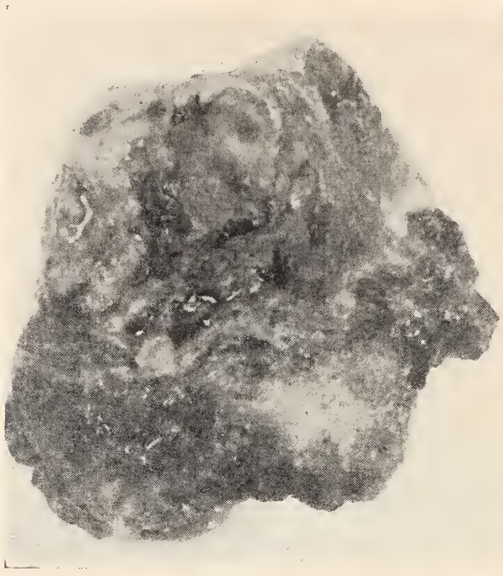
Furstenberg,[3] commenting on carcinoma of the larynx stated, "85 per cent of the patients came for examination six months or more after the appearance of an altered voice."

Damitz and Dill[2] found nine and a half months to be the average length of time that hoarseness had been present before their patients presented themselves for examination.

In 1934, New and Waugh[7] reported a consecutive series of 135 operations for carcinoma of the larynx. There were seventy-five thyrotomies with no operative death and sixty laryngectomies with one operative death. One hundred and seven of these cases had been operated at least five years previously and of these, 82.3 per cent of the cases in which thyrotomy had been performed and 56.1 per cent of those in which laryngectomy had been performed were free from recurrence of the disease.

*From the Henry Ford Hospital.

The Jacksons[4] report a series of 135 patients in which thyrotomy had been done. Of these, 82.2 per cent were cancer free after three years. Fifty-seven per cent of 130 patients on whom laryngectomy had been done were free of recurrence after three years.



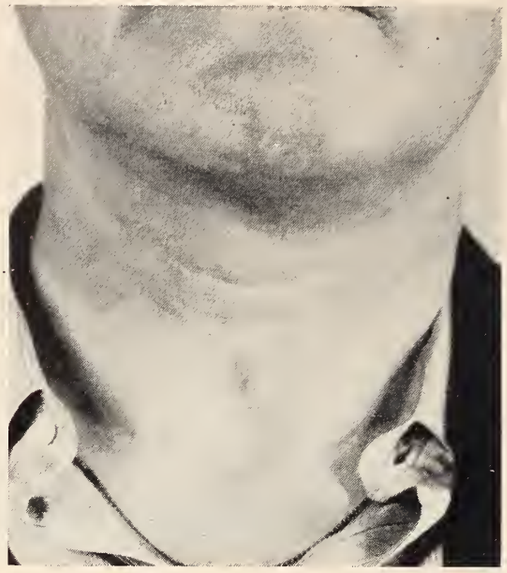


Fig. 1. Case 1. (*left*) Entire epiglottis, anterior surface.
Fig. 2. Case 1. (*right*) Following removal of epiglottis.

About tumors of the epiglottis, New and Figi[6] state, "Tumors of the epiglottis of a low grade of malignancy are best taken care of when the lesion is definitely limited to the epiglottis, by performing preliminary tracheotomy. Then, by means of a Lynch suspension apparatus with a flat spatula, the growth may be removed under direct vision, a protected diathermy point being used."

Whether or not a tumor on or about the vocal cords can be adequately removed by thyrotomy or whether total laryngectomy is necessary depends on such factors as location, activity of the growth, fixation of the vocal cord and extent of growth, which, of course, is influenced by the length of time the tumor has been present.

I wish to report three cases which illustrate the general types of surgical procedure that are useful, depending on the nature, location and extent of the tumor.

Case Reports

Case 1.—A white man, aged fifty-three, was examined on September 12, 1941, at which time he stated that he had had a sore throat for about three weeks. The soreness seemed to be located above the soft palate, was not affected by swallowing liquids or solids, but was noticeable on swallowing saliva. There was no general discomfort. The remainder of his history was essentially negative.

On ear, nose and throat examination there were no glands palpable in the neck. The pharynx was negative. The nasopharynx was well seen and perfectly normal. The ear canals and drums were normal. The nasal mucous membrane appeared normal. There was no abnormal pus or discharge. On examination of the larynx an ulcerative lesion was seen on the anterior surface of the right side of the epiglottis. This lesion appeared to be raised above the surface and the surrounding membrane appeared dull. The impression at that time was that it was strongly suggestive of carcinoma. Temperature was 98.6, pulse 72, respirations 16, height 5 feet 7¾ inches, and weight 162¾ pounds, which he stated was about his normal weight. General physical examination revealed no abnormal findings. His blood pressure was 140 mm. systolic and 90 mm. diastolic. He was edentulous, and there was a small umbilical hernia present.

Hemoglobin was 15.6 grams. White blood cells 6,600. Kline exclusion test was negative. Urinalysis showed no abnormalities.

Roentgenograms of the chest were negative.

On September 17, 1940, several biopsies were taken from the lesion on the epiglottis. Microscopic examination was reported as follows: "Section reveals the surface to be well covered by squamous epithelium, which in one area has considerable keratin on the surface. The basal membrane has been invaded and the underlying corium infiltrated by large numbers of anaplastic, malignant, epithelial cells. These invade rather diffusely. There is no pearl formation. Mitotic figures are seen." The conclusion was squamous carcinoma, Type II.

On September 23, 1940, a tracheal tube was placed in at the level of the second tracheal ring. On October 7, 1940, the patient's pharynx, base of the tongue and larynx were thoroughly cocainized and the patient was

given pentothal sodium intravenously. A Lynch suspension laryngoscope was inserted using a special tongue blade which did not include the epiglottis. With surgical diathermy, using the cutting blade, the entire epiglottis was removed (Fig. 1). Vessels were coagulated with the coagulation current as necessary. The base from which the epiglottis had been removed was thoroughly electrocoagulated and eight gold radon seeds of a value of 1 millicurie each were inserted into the base. Microscopic examination of the epiglottis confirmed the diagnosis of Grade II squamous cell carcinoma, and revealed that there was an adequate margin between the widest extension of the tumor and the point of amputation. There was some pain on swallowing, and aphonia developed as a result of the postoperative swelling and reaction.

On October 16, 1940, approximately nine days after the operation, the voice had returned to a quality that was practically normal. The soreness on swallowing remained for a while, however. During this time the patient was being fed through an intranasal tube into the stomach which had been placed in before the operation. On November 2, the tracheal tube was removed, and also the intranasal feeding tube, and he was placed on a high caloric liquid diet. The tracheotomy wound healed in a few days without incident (Figure 2). The patient left the hospital on November 9, 1940.

At present, approximately thirty months after the operation, there has been no evidence of recurrence and he has been completely free of symptoms.

Case 2.—A white man, aged sixty-five, of Polish extraction was examined in the Out-Patient Clinic of the Henry Ford Hospital on June 26, 1941. He complained of hoarseness of nine months' duration which had grown progressively worse. He had been examined by a physician in his locality who had assured him that the condition was not serious. Since the condition progressed he had sought another opinion. There had been no cough, hemorrhage or weight loss.

On indirect laryngeal examination, a tumor was seen involving the anterior third of the right vocal cord. This was thought to be carcinoma. The remainder of the ear, nose and throat examination was found to be negative. General physical examination was found to be essentially normal except for slight obesity. The blood pressure was 142 mm. systolic and 90 mm. diastolic. Temperature was 99 degrees F., pulse 80 per minute and respirations 18 per minute. Weight was 179 pounds. Height 65 inches. Urinalysis showed no abnormalities. Hemoglobin 89 per cent; leukocytes 7,450. The Kline exclusion test was negative. Phenolsulfonphthalein test was run and found to be satisfactory. Forty-nine per cent of the dye was excreted in two hours.

On June 27, 1941, direct laryngeal examination was carried out and a biopsy of the tumor taken. Cocaine anesthesia was used. The tumor proved to be a squamous cell carcinoma, Grade II. Three days later tracheotomy was carried out under local anesthesia. The opening was made through the first and second tracheal rings. The usual degree of general reaction followed the tracheotomy.

On July 14, 1941 thyrotomy was carried out.

Preoperative medication consisted of nembutal, grs. 3, morphine sulphate, grs. 1/6, and atropine sulphate, grs. 1/150.



Fig. 3. Case 2. Following thyrotomy, retraction of scar.

With 1 per cent novocaine, superficial cervical and superior laryngeal block were carried out with the method described by Adams.[1] With ½ per cent novocaine, the skin was infiltrated in the usual manner.

An incision was made through the skin and subcutaneous tissue over the larynx and the well ossified thyroid cartilage divided just to the left of the midline. The tumor was found to involve the anterior third of the right vocal cord, the anterior commissure and the anterior end of the left vocal cord. The tumor was excised and immediate frozen section examination indicated that the margin was adequate. The corresponding portion of the thyroid cartilage was removed and the area thoroughly electrocoagulated with the electric cautery. The edges of the thyroid cartilage were brought together and the muscles and skin loosely closed. A rubber drainage tube was allowed to extend to the opening in the thyroid cartilage and a small bismuth gauze pack put in. A tracheotomy tube was inserted in the original tracheotomy opening.

Postoperative reaction was slight.

On the ninth postoperative day the tracheal tube was removed. After two weeks he could swallow liquids so the Rehfuss tube through which he had been fed was removed. The neck wound drained for several weeks and then healed completely with moderate scarring (Fig. 3).

At present, approximately twenty months after the thyrotomy, there has been no evidence of recurrence of the tumor. The voice is satisfactory. He carries on his own retail clothing business as he had done before his illness and operation.

Case 3.—A white man, aged sixty, was examined in the Out-Patient Clinic of the Division of Otolaryngology on July 3, 1940. He complained of hoarseness which had been present for about a year. He had consulted a physician soon after the onset of the hoarseness who had treated his larynx with a spray. The hoarseness had grown much worse during the three months before admission. There had been neither pain, cough nor hemorrhage. He was a known mild diabetic.

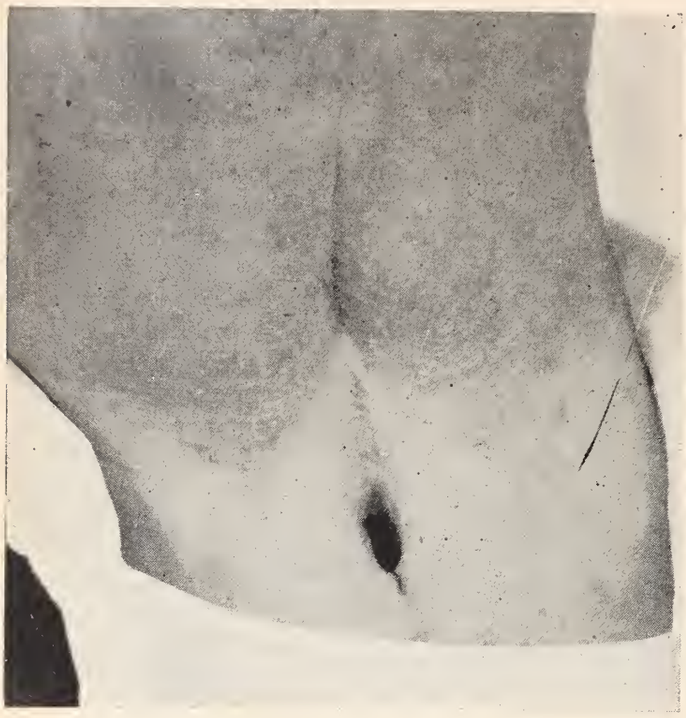


Fig. 4. Case 3. Following laryngectomy, permanent tracheal opening.

On examination of the ear, nose and throat he was found to have a mild vasomotor rhinitis. On indirect laryngeal examination a tumor was seen involving the anterior two-thirds of the right vocal cord. There was no fixation of the vocal cord. The tumor was thought to be carcinoma. The remainder of the ear, nose and throat examination was negative.

On general physical examination, slight obesity and moderate generalized arteriosclerosis were noted. Urinalysis showed Benedict's test to be positive. Blood sugar determination was reported at 143 mgm. per 100 c.c. of blood. Hemoglobin was 80 per cent; red blood cells 4,560,000, leukocytes 8,700; polymorphonuclears 76 per cent, small lymphocytes 18 per cent, large lymphocytes 4 per cent, and mononuclears 2 per cent. The blood Wassermann test was negative. Roentgenograms of the chest were negative. He was placed under the observation of our Division of Metabolism for his diabetes.

On July 8, the larynx was cocainized and by direct laryngoscopy a biopsy was removed from the right vocal cord. This proved to be squamous cell carcinoma, Grade III.

On July 15, under local anesthesia tracheotomy was carried out, the tracheal tube being placed at the level of the first tracheal ring.

The usual general reaction followed the tracheotomy.

It was felt that since there was no fixation of the vocal cord that removal of the tumor by thyrotomy could possibly be accomplished, but the patient was advised that laryngectomy would be carried out if it were thought necessary after the larynx was opened.

On August 5, 1940, preliminary medication consisting of 3 grains of nembutal and morphine sulphate, grs. 1/6, and atropine sulphate, grs. 1/150, was given. Deep and superficial cervical block and superior laryngeal block anesthesia were carried out with 1 per cent novocaine according to the method described by Adams.[1] The skin was thoroughly infiltrated with ½ per cent Novocaine. A few drops of 10 per cent Cocaine were dropped into the trachea.

An incision was made extending from the submental region to below the tracheal opening. The hyoid bone was divided in the midline and the cut edges retracted laterally. The thyroid cartilage was divided slightly left of the midline. The tumor was found to be rather extensive, involving the anterior commissure, the anterior two-thirds of the true vocal cord and apparently involving the right false vocal cord. It was removed, however, rather widely. Immediate frozen section examination was made and the margin found to be inadequate in the region of the false vocal cord and posteriorly in the region of the aretynoid, It was decided that laryngectomy was necessary. The larynx was thoroughly skeletonized and the cricoid cartilage and trachea divided, a tongue-shaped flap of mucous membrane being removed from the posterior wall of the cricoid to aid in closing the tracheotomy opening. The larynx was then removed from below upward according to the method described by New.[5] The pharynx and esophagus were then closed with two rows of catgut sutures. The upper end was closed in the shape of a T. The trachea and cricoid were sutured to the skin and the wound closed. Drainage tubes and a bismuth gauze pack were left in place.

Microscopic examination of the larynx showed the tumor had invaded rather deeply but had not broken through at any point.

The postoperative course was without incident except that at the end of the third week it was necessary to close a pharyngeal fistula.

On September 5, 1940 he was dismissed from the hospital.

He was provided with an artificial larynx, but he has developed a pharyngeal speech which is quite satisfactory.

Approximately thirty-one months since the laryngectomy there has been no evidence of recurrence (Fig. 4).

Comment

Carcinoma of the larynx is curable by surgical treatment in a high percentage of cases. In general, the earlier treatment is instituted the better the chance of cure.

Since hoarseness is frequently the only symptom present in the earlier stage of the disease,

any patient who remains hoarse to any degree for more than a few weeks should have a laryngeal examination.

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MSMS

Deafness or Impaired Hearing*

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A duty and responsibility of the family physician is to guide and direct hard of hearing and deafened patients away from useless treatment and toward the possibility of alleviation or cure when such exists.

Complete deafness is rare and is always due to destruction of the perceptive mechanism in the ear. Nothing can be done except special training in lip reading and speech.

Impaired hearing may be due to lesions of the sound conduction apparatus or perceptive mechanism and in each case appropriate tests indicate the location of the pathology. As a rule lesions of the perceptive mechanism are not amenable to treatment, but efforts should be made to remove any etiological factor to prevent further loss. On the other hand impaired hearing due to lesions of the conductive apparatus can be improved or restored at the present time in the majority of cases by appropriate medical or surgical means. These treatments, including the Fenestration Operation for Otosclerosis will be briefly described, and the results of these treatments in a series of cases will be presented.

■ At this moment your drum membranes are being agitated by waves of alternate rarifaction and condensation of air. The ossicular chain attached to the drum membrane at one and to the oval window of the labyrinth of the inner ear the other end is setting into vibration the fluid that fills your inner ear. These fluid vibrations are being converted into nerve impulses in the Organ of Corti, and are being carried to the brain stem and thence distributed to both temporal lobes so that it is almost impossible to develop deafness from a brain tumor.

Whether or not you actually hear what I am saying depends not only upon the integrity of your ears, but also upon the state of your cerebral cortex; in other words your attention. If your attention is far away in a pleasant day dream you will remain completely oblivious to the nerve impulses coming from your ears. When Mark Antony said "Friends, Romans, Countrymen, lend me your ears," he might have said more exactly "Friends, Romans, Countrymen, your ears are responding nicely to the sound vibrations of my voice, now please lend me your attention."

Inattention is enough of a temptation to all of us, but to the hard of hearing individual who must exert an added effort to understand, inattention easily becomes an established habit. Now let any charlatan persuade such a person that he can improve his hearing, and the person will begin to listen and for a time will actually hear more, although his hearing acuity remains unchanged. This fact accounts for the numerous phony cures for deafness that come and go and will continue to come as long as hard of hearing persons have the money to pay for them. One of your duties and responsibilities as family physician is to be able to guide and advise your hard of hearing patients away from useless treatments and toward the possibilities of alleviation or cure when such exist.

We are now in a much better position to evaluate treatments for deafness than we were a few years ago, for we now have in the audiometer a very accurate and uniform method for measuring hearing acuity. The audiometer measures the threshold of hearing in each ear separately for each octave from 64 to 8,192 vibrations, and the result is tabulated on the audiogram. Normal hearing lies within ten decibels of the zero line, the decibel being a unit of loudness. The important hearing for practical purposes is that for the speech tones which lie mostly between 500 and 2,500 vibrations per second, so that the tones of 512, 1,024, and 2,048 in the audiogram are referred to as the speech tones.

*Read at the Seventy-seventh Annual Meeting of the Michigan State Medical Society at Grand Rapids, September 25, 1942.

When there is a loss of 20 decibels for the speech frequencies, the person begins to be aware of a slight impairment of hearing. At 30 decibels loss the hearing impairment begins to become embarrassing, while at 40 decibels the individual becomes definitely handicapped socially and economically. The lower limit of serviceable or practical hearing may be placed at about 40 decibels loss. At 50 decibels a hearing aid is very much needed; at 70 decibels the loud spoken voice can scarcely be heard close to the ear; at 90 decibels a shout can hardly be noticed at the ear and the individual will be considered "stone deaf" by his associates. The audiometer does not produce sounds louder than 100 decibels, since such tremendous noise would actually damage the normal ear. For practical purposes we consider a person to have absolute deafness if he does not hear at 100 decibels of loudness.

We have learned from the audiometer that normal hearing varies with fatigue, weather and other factors, as much as ten decibels. Therefore to be significant a hearing gain after treatment must exceed ten decibels for the speech tones. *No treatment for deafness can be regarded as of proven value until there is audiometric proof of hearing improvements greater than ten decibels.*

Complete deafness is rare, and is always due to complete destruction or absence of the perceptive mechanism in the labyrinth of the inner ear. Such an individual must rely entirely upon lip reading.

Partial loss of hearing or impaired hearing is very common and may be due to a lesion of the sound conducting apparatus, that is the external ear canal, the drum membrane ossicular chain, in which case we speak of a conduction deafness, or it may be due to a lesion of the perceptive apparatus in the inner ear in which case we speak of a nerve deafness. By means of diagnostic tuning fork tests it is possible to determine with considerable accuracy whether the hearing loss in a given case is a conduction or a nerve deafness. This differentiation is of primary importance for accurate diagnosis and effective treatment.

Nerve Deafness

The commonest cause of nerve deafness is old age, and is first seen in a loss of hearing for the tones of high pitch. There is no known treatment for old age nerve deafness.

The nerve of hearing may be injured by certain toxins and drugs among which should be mentioned the toxins of severe influenza, typhoid, pneumonia, measles and scarlet fever, and the drugs quinine and aspirin. Chronic focal infection and tobacco in certain persons may be the cause for nerve deafness. Syphilis, tumors of the acoustic nerve, hypothyroidism, food allergy and exposure of the ears to loud sounds for a long time as occurs in aviators, artillerymen, boilermakers and pneumatic riveters, are other causes of nerve deafness.

If possible the cause of a nerve deafness should be determined and eliminated, since in certain early cases due to syphilis, food allergy, or focal infection prompt removal or treatment of the cause results in recovery, or at any rate prevents further loss of hearing.

Once nerve deafness from any cause has become established nothing can be done to restore the hearing. Vitamins, particularly thiamin, have been advocated, but in my experience the results have been uniformly disappointing. Prostigmine has recently been advised, but there is no audiometric proof of its value and I have found it to be useless.

In cases of nerve deafness electrical hearing aids are generally unsatisfactory and lip reading or an ear shell or trumpet must be used.

Conduction Deafness

While nerve deafness predominates in the later years of life, it is fortunate that in childhood, youth and middle life conduction deafness is more common, for with recent advances in the treatment of deafness we are now able to restore serviceable hearing in the majority of these cases.

There are five ways in which the sound conduction apparatus can be affected so as to impair hearing.

The easiest to cure is occlusion of the ear canals by cerumen. Not long ago a woman wearing an electrical hearing aid came to me with both ear canals completely blocked by wax. With the wax removed she no longer needed her hearing aid. Because of cases like this we believe that an otologic examination should always be made before a person is fitted with a hearing aid.

In childhood the most frequent cause for impaired hearing is blocked eustachian tubes by en-

larged adenoids. The air in the middle ear becomes absorbed and replaced by serum, so that this condition is also known as secretory otitis media. Secretory otitis media can also occur after removal of the adenoids due to lymphoid hypertrophies around the eustachian orifice. Typical is the audiogram of a child whose adenoids had been removed but who nevertheless developed a secretory otitis media that cleared up after irradiation of the naso-pharynx combined with inflations of the eustachian tubes. In adults secretory otitis media may come from adenoids, an acute head cold, a nasal allergy or malocclusion of the temporomandibular joint as the result of loss of support of the molar teeth, with distortion of the joint capsule presssing on the eustachian tube. Fortunately, and contrary to our old ideas, blocked eustachian tubes do not lead to progressive and permanent deafness. The audiogram of a man of 49 who after twenty years of impaired hearing was found to have enlarged adenoids which were removed will show restoration of practically normal hearing.

Both during childhood and adult life a perforated drum membrane or a suppurative otitis media are accompanied by impaired hearing. Cases of acute suppurative otitis media tend to clear themselves up, but cases of chronic suppurative otitis media require treatment and should always be treated until the suppuration ceases, not only to prevent further loss and perhaps to improve the hearing, but because some of these cases are due to a bone invading process and are dangerous to life. When the ear is dry the hearing can sometimes be further improved by the use of an artificial drum membrane to close the perforation. The hearing improves when cases of chronic suppurative otitis media were cleared up. The persons with perforated drum membranes sometimes have hearing restored with an artificial drum membrane.

Otosclerosis

The last, and the most frequent and important cause for conduction deafness is otosclerosis. Otosclerosis causes most of the cases of chronic progressive deafness in early and middle adult life, so that about 70 per cent of the members of the Society of the Hard of Hearing have this condition.

Otosclerosis is a disease affecting the hard bony capsule that surrounds the labyrinth of the inner ear, beginning as a focus of new-formed spongy bone that replaces the normal hard ivory-like capsule. The most frequent area affected is just in front of the oval window, so that as the focus of otosclerosis slowly enlarges it gradually encroaches upon the oval window until finally it grows across onto the footplate of the stapes resulting in ankylosis. The hearing impairment which came on very slowly and insidiously becomes profound as the conduction of air-borne sounds become completely shut off by the obliteration of the oval window.

The cause of otosclerosis is not known, except that there may be an hereditary tendency. There is no medical treatment to arrest the process or to restore the hearing, and until very recently we could only make the diagnosis, advise against unnecessary and useless treatment and enjoin the use of an electrical hearing aid and lip-reading.

Because the hearing loss in otosclerosis is primarily due to a mechanical obstruction to sound conduction it has seemed reasonable to attempt to circumvent this obstruction by surgical means. For nearly fifty years otologists tried to make a new window into the labyrinth of the inner ear to take the place of the occluded oval window, but those attempts invariably failed because the artificial oval window would heal over by new bone and any hearing improvement would be lost. In 1924 a Frenchman named Sourdille first succeeded in restoring the hearing permanently in a case of otosclerosis by a complicated and prolonged three or four-stage operative procedure extending over more than a year. Although Sourdille operated on a considerable number of cases of otosclerosis apparently with a fair degree of success, his operation was too time-consuming and his results were too unreliable for it to be practical. It was not until 1938 that a practical means of restoring hearing in otosclerosis became available, when Julius Lempert, an American, improved upon and combined Sourdille's series of operations into a single one-stage technique. Lempert's original operation known as the fenestration operation has been further improved until now, with the technique in use during the past year, I am able to report a probably permanent hearing improvement in approximately 90 per cent of the patients operated upon.

Fenestration Operation

The fenestration operation consists essentially in removing part of the non-functioning ossicular chain, in making a new labyrinthine window into

the horizontal semicircular canal, and in connecting the drum membrane to this window by means of a plastic skin flap taken from the ear canal. In the completed operation the vibrations of the drum membrane are now carried directly to the new window without the intervention of a ossicular chain. While the hearing with this reconstructed conducting mechanism is never entirely up to normal, extraordinary improvements and restorations of practical hearing are observed in persons who were profoundly deafened for many years. The problem of bony closure of the new window has been largely solved by four important features:

1. The maintenance of strict surgical asepsis throughout the operation and in the entire aftercare.

2. The use of an irrigating apparatus during the operation to keep the window immaculately clean and free from bone dust and blood.

3. The use of dental polishing and burnishing burrs to produce a perfectly smooth polished bone surface.

4. Covering the window with a thin periosteal-lined skin-flap.

The fenestration operation is done under avertin anesthesia, the ear having been carefully prepared, sterilized, and covered with sterile bandages some hours before. The external ear canal is enlarged by removing a triangular piece of skin and periosteum, and a self-retaining retractor exposes the mastoid bone.

Enough of the mastoid air cells are removed to expose the ossicular chain and the bone of the horizontal semicircular canal. The bony wall of the external ear canal is removed carefully preserving the thin skin that lines the canal. This skin, attached to the drum membrane, is now cut to form a plastic flap and a binocular dissecting microscope is moved into position. It is now possible to palpate the stapes in order to confirm the diagnosis of stapes ankylosis, and very often the new nodular otosclerotic bone can be observed where it has grown across the oval window onto the footplate of the stapes.

With the microscope to give adequate magnification, and with the irrigating apparatus attached to provide a flow of sterile normal saline across the horizontal semicircular canal, the new window is now made in the latter, using the dental finishing and burnishing burrs. The completed window into the labyrinth of the inner ear lies directly above the oval window and is slightly larger than the oval window. The plastic skin-flap is now placed over the new window, and is held in place with pledgets of vaselined gauze. The entire operation takes about two or two and one-half hours to complete.

The hearing which may be noticeably improved immediately after the operation, declines during the first week and then slowly improves to reach its highest level two to six months after the operation.

Results

In my experience in 261 operations over a period of more than four years, bony closure of the new window occurs if at all, generally within six months of the operation, so that a hearing improvement maintained for longer than six months may be regarded as probably permanent. Except for temporary dizziness for a few days or a week or two there is usually little discomfort or annoyance from the operation, and the patient is out of bed on the third or fourth day.

The fenestration operation is not always successful. There are occasional cases, about 1 or 2 per cent of the operations, where the hearing is worse instead of better. The poorer hearing ear should always be selected for operation so that there will be no risk of making the good ear worse. In another 6 or 8 per cent the hearing improvement is only temporary or is less than ten decibels for the speech tones and is unsatisfactory. In the remainder the hearing will be improved permanently, from 10 to 47 decibels above the pre-operative level. As a rule the hearing from a satisfactory fenestration operation surpasses that from a well-fitted electrical hearing aid. Definite economic rehabilitation will occur in the majority of properly selected cases. I have had no serious complications and no fatalities in any of my cases. I began this work over 4 years ago.

The fenestration operation is suitable for cases of otosclerosis with good bone conduction indicating a good nerve of hearing. The ideal candidate has a 50 to 60 decibel loss for the speech tones with normal hearing by bone conduction, but worth while hearing improvements can sometimes be obtained with 80 to 90 decibels loss.

While the results of the fenestration operation

are still far from perfect, they are sufficiently encouraging so that this new development promises to become one of the most important advances ever made in the treatment of deafness. The individual who in the prime of life finds that he is slowly losing his hearing from otosclerosis for the first time may have hope of regaining most of what he has lost. In order to convey to you what it means to such a person to regain his hearing, I should like to read part of a letter from the wife of an acoustical engineer who recently underwent the fenestration operation.

When I submitted to the fenestration operation in June, 1942, I had absolutely no comprehension of what restored hearing would mean. Never once in my fifteen years of deafness had I imagined the joy of sounds normally heard. . . . The earphone I had worn since Christmas 1937 seemed a fine thing; it was an instrument of good make and my family and friends showed me much consideration in the using of it. I counted myself fortunate to have mastered the handicap so well, and was often complimented on the ease with which I carried on a conversation. . . .

During the ten days in the hospital there were no signs of improvement and I dared not think of what the result might be. On the tenth day I was taken home, and during the automobile ride, there came strange and contradictory messages from the two ears. . . . This was amusing as well as exciting, because it marked the first consciousness of sensation in the right ear. . . .

On the twelfth day the bandages came off and a hearing test in the doctor's office showed an increase of ten decibels of hearing. Then the fun began. The removal of the bandages may not have been quite so dramatic as the movies would show it when sightless eyes are made to see again. The function of hearing is so different a thing than that of sight anyway, that the realization of its restoration is a much more subtle awareness. But surely in the week that followed there were enough exciting new experiences for any scenario!

I remember walking rather shakily downtown and being amazed at what a noisy village we lived in. Actually it is a quiet little four corners, but the extreme quiet I had known was not the true level. Hearing tremendous motors bear down on me from behind and finding them to be only innocent, ordinary autos; sitting quietly at a store counter and having conversation drift into my ear—I didn't mean to listen in, but the novelty of being caught up in the commonplace visiting of neighbors and acquaintances, even strangers, tied me up with the world I had lost; to be part of my own house once more, and be spoken to from room to room, or up and down the stairs, meant undescribable joy....

The next test in the doctor's office, nineteen days after the operation, showed a hearing gain of thirty-three decibels, which has remained in each successive test.

It had been so long since the piano had meant pleasure that sitting down to that instrument for the first time brought a real peak in the curve of happiness I climbed. The richness of tone, and the endurance of sounds and musical colors I had completely forgotten. That is the insidious effect of progressive otosclerosis, its onset is painless and usually so gradual that many sounds are given up quite unconsciously. Did you notice that I said I had been deaf for fifteen years, yet had worn an earphone for only five? That is because I sought mechanical aid only when I began to lose speech sounds, or contact with people. Looking back now I see that I must have spent ten years giving up small sounds in every-day living without knowing it. You may say, "How lucky you were to be spared the ugly scratches of noise we must endure!" But the answer to that is, "One gets used to them very quickly and finds that a small price to pay for having all the good sounds back."

Playing the piano at first brought real pain to the ear, and only short practice times could be indulged in. As a matter of fact, *all* sounds in the first two weeks seemed too loud, but probably this was because I was not used to them. The quality of the restored hearing is so natural that this pain passes away very soon indeed, however.

Appreciation of the re-education in music that is opening before me may be keener in the knowledge that I had taken a college degree in music and piano in 1932. A month following my graduation recital in piano, the father of the surgeon who performed the fenestration operation in 1942 gave me this verdict after his examination of my ears: "You've got progressive otosclerosis, and there is nothing to be done about it, so put on an earphone and make the best of it."

A self-confidence is returning also in this awakening. As a deaf person I could not understand why the piano no longer brought pleasure, because the memory for sounds is so poor that I could not remember what I had lost. The nervous strain of carrying on with deafness is a much deeper and more subtle thing than anyone who has not known both hearing and its loss can possibly evaluate. I suppose this may vary with individuals, but a hard of hearing person, no matter how magnificent his acceptance of his handicap may appear, must make a tremendous effort to stay tuned in with the world. It is with a good deal of surprise that I find myself writing these lines, because I may safely say that I thought that I was well reconciled to the fact of deafness. But in many ways, in the depths of the subconscious, I had never accepted deafness. The psychology of deafness is a very real thing, calling for a special sympathy which I am only now developing!

I certainly do not want to seem ungrateful for the five years' excellent service the hearing aid gave me. I hesitate to think what those years without its help might have been. But, the point I do make, is that the best earphone is a poor substitute for normal hearing. If this seems too obvious a statement, it is only that I, who have been through the looking glass of the distorted and the undistorted reflection can hardly believe my ear now that it has been given back to me.

Diagnostic and Therapeutic Problems of Obesity*

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The synopsis of the paper will be as follows: Obesity is always caused by disproportion between the intake and expenditure of calories. Increased intake may be voluntary and conscious or not recognized because of several features. Sometimes there is excessive hunger due to hypoglycemia, habitual overfilling of the stomach, addition to concentrated foods, or social pressures for eating. Decreased expenditure of calories may be associated with physical handicap, hypothyroidism, psychological or economic handicaps at activity. There are certainly constitutional and genetic types of obesity. It seems impossible to make any direct correlation with endocrine factors in the direct etiology, however. Clinical types will be illustrated and the therapeutic program on dietary restriction adaptable for different patients will be explained.

■ In discussing the subject of obesity, I think it is extremely necessary that we give attention first to the question of definition of terms. The word "obesity" meaning too much fat would seem to define itself, but the question always comes on that "too much." Is it a matter of taste, depending upon the preference of the individual for figure, or upon appetite, or is it to be based on actual biological facts with demonstrated advantages or disadvantages of certain proportions of height and weight?

For clinicians it becomes necessary to have something in the form of a reference standard which does not depend merely on the whim of the individual; and yet I shall have to say that all of us will do better by and large if we use our eyes and inspect the nude figure or the slightly draped figure, rather than being slavishly addicted to any table of height, weight and sex.

There are circumstances where one must have such a table in order to be convincing, and in order to have prediction standards as to what the goal of a reduction program should be. We recognize, however, that in using any statement of a single weight for a given height, age and sex, this figure represents a mathematical average based on a large number of observations of humans supposedly well. Whenever one is dealing with averages, he wants to know how much spread there is in the original data between the highest weight and the lowest weight for that given height. All the tables that are in current use in medicine are based on the concept of allowing variations of at least ten per cent above and below the average figures quoted.

Assume, for example, that we were dealing with an individual of height sixty-three inches and weight 120 pounds. Ten per cent leeway would mean ten per cent of the 120 pounds or twelve pounds, and one would have therefore to consider such an individual with height sixty-three inches as being within normal limits all the way from 120 minus twelve or 108 pounds up to 120 plus twelve or 132 pounds. Now, I submit that if an individual whose approximate weight is 108 pounds should increase to 132 pounds or put on twenty-four pounds, she will know it without our having to tell her that she is obese, or vice versa. We can tell those things better by the clinical judgment of the experienced eye. That ten per cent leeway must be allowed not only for taste, but because of variations in the anteroposterior diameter of the chest, variations in how heavy the skeleton is, and in the anthropological types.

If one is interested in trying to get a more definite or rigorous definition of this, he will get very little information in the literature. Some of you may recall two extremely significant papers by Lieutenant Commander Behnke and his collaborators in the *Journal of the American Medical Association* a few month ago in which they approached this problem. Using rather rigorous standards of height and weight which are provided for the military service of our country, they find that there is a significant number of very vigorous, strong, healthy young men who would be excluded from the military service because they are too heavy, and some of these men are among the stellar athletes. Why should they be excluded?

They therefore took up the study and said: "Obesity means too much fat; not too much weight. There can be a distinguishing method worked out. What should it be?" A very obvious thing has been tried—recognizing that fat has a low specific gravity, that it floats on water.

*Read at the Seventy-seventh Annual Meeting of the Michigan State Medical Society at Grand Rapids, September 24, 1942.

Therefore, they have immersed their subjects completely in a tank of water and determined the volume by the water displaced, which is simple physics.

It isn't simple clinical manners, however. Imagine trying to immerse each of our patients in order to study his or her obesity. Physical equipment as well as social problems are involved in this whole question. It isn't extremely practical then for you and me in general practice, but what Lieutenant Commander Behnke has demonstrated is this: That there are some individuals who are overweight and whose specific gravity of the body as a whole is low. They are fat. There are other individuals who are overweight by these conventional standards, the specific gravity of whose bodies compares with that of the slender and a very acceptable military type and they are not fat. They are just big men.

What can you and I do about it? Well, until somebody works out simpler methods for clinical application, we simply have to look them over, and I think I can recognize by and large the man who is too fat and the man who is simply a tremendous specimen with large bones and musculature and large internal organs as well. Now, I think that represents a very interesting approach, and I hope it can be developed and made more simple; but in the meantime, you and I must recognize that we can spot obesity with our eyes perhaps better than we can with the measuring stick and scale.

Another problem that comes up in the discussion of obesity is the fact—we may as well recognize it as clinicians—that the style makers got the jump on us. The real urge for reducing excess weight did not come from recognizing physiological disadvantages but psychological disadvantages—that is, of fitting the style concept of the day and age. That is a very potent urge for women and for some men, but there are physiological disadvantages with which we must be armed when we are going to talk with our patients.

The physiological disadvantages are numerous and are well worth remembering. Obesity is a disadvantage to the heart, to the peripheral circulation, to the respiratory system, to the digestive system, to the skeletal system and to the pancreas. Perhaps there are a few other disadvantages, but those things we can elaborate on if necessary, in lay terms for our patients. We will not need to use that kind of argument for any young woman between the ages of fifteen and forty-five. We may have to use such reasons before she is fifteen and after forty-five and we will require them much more frequently with men. It is difficult to get the girl or boy under adolescent years to take the weight problem seriously. They may, therefore, have to be disciplined if we are going to achieve anything in reducing them, and discipline must begin at home via the parents. These disadvantages may have to be explained then to the patient and to the parents involved.

The next problem which has been very widely discussed is concerned with the etiology of obesity. Now, I am quite in agreement with those who say that obesity is due to eating more than one needs, but I do not agree that it is the same as saying that obesity is due to gluttony or laziness. People vary in the need for food, depending upon not only exercise, but also certain inherent characteristics of the body.

Is this problem of obesity—or leanness which is the other extreme—an endocrine problem? Seldom. Is it a metabolic problem? Always. By that, I mean merely that it is a problem in maintaining a good balance between the intake of energy in terms of calories and the expenditure of work in exercise and heat in terms of calories. If that balance is disturbed in the direction of intake of more calories than are expended, obviously there will be a gain of weight. Now an individual that tells us that he gains weight without eating or by eating an insignificant number of calories, is doing one of two things. He is either reporting on very temporary gains of weight due to water accumulation, which is not a permanent problem; or he is not recognizing the intake of calories. That has been proved in enough cases to make it a dogmatically safe statement. We can say to your patient, "You can't gain weight without your eating more calories than you put out." In proportion to our insistence and our conviction on that matter will be our patient's conviction and our patient's success in reducing.

Now, we must still come back to certain clinical types of obesity and I think it worth while to illustrate some of these. I will point out certain of the deficiency types that lead to obesity.

Case 1.—This patient is labelled osteomyelitis. She was assumed to have adiposogenital dystrophy by the first clinician who saw her in the hospital. Her figure suggested it too. I think we can read from the figure nothing except the obvious fact that she was obese and overweight, and a careful study of her showed that she had only one deficiency, and that is in exercise because of the osteomyelitis in the heel, which kept her off her feet. She had plenty of time to eat, had an adequate appetite, and every reason to indulge it until she was instructed and kept on a definite diet in the hospital. When she got home she gained weight again because she was unwilling to follow the rules. That is one kind of deficiency. It is a metabolic problem; it is not an endocrine problem at all. It is not a deficiency or disturbance in any of her glands. That was assured from the rest of the examination made in her case.

Similarly, I might show you the patient in whom the deficiency is not so much of exercise as a deficiency in certain social satisfactions: A school teacher, a maiden woman in her thirties who admitted after we had studied her problem that, due to her lack of social contacts and interests in life plus the irritation of an invalid and demanding mother, she took refuge in the pantry and gained weight. Now, that mechanism is not infrequent, and it shows up in bizarre forms. It is worth remembering. I wonder how many of us when we are bored or unhappy will reach for something to eat?

Another type in this problem is that of familial obesity. The patient is the daughter, who was brought in by the mother. This is so characteristic that it makes it sometimes difficult to keep a straight face when a fat mother brings in her fat daughter for me to find out why she is obese and tell her what to do about it. Now, maybe that is an inherited tendency either to skeletal type or to fat distribution. This is an involved question which is extremely difficult to settle. Maybe that child has learned certain manners of eating from her mother. We know that does occur in some patients. The two things might occur in both mother and daughter, the congenital type, and improper habits of eating. However, I have discovered that these mothers usually expect to get two prescriptions for the price of one, and the success has often been determined by turning to the mother and saying to the daughter, "Perhaps you can get somebody else in your family to go on this diet with you, so that the two of you will be doing it at once." Occasionally the mother will break out in a laugh, and sometimes she will look a little astonished and then really admit she wanted to try but didn't have the courage to start by herself.

I do know that a pre-adolescent daughter will almost never reduce unless her fat mother will go on the program with her. It takes just a little straight forward speaking in such a familial situation to get the program under way.

The next case shows a problem which is more definitely of an endocrine type.

Case 2.—This patient had myxedema coming on gradually during several years before she was seen, and I present this to show how little obesity is associated with a profound and lasting myxedema. She was overweight, something like forty pounds, but the experience with this particular patient is not typical of what happens in the weight control of myxedema patients. She was placed upon thyroid given regularly and her basal metabolism brought up to normal with the extensive and gratifying clinical improvement that is well known. She was at the same time put on a reduction diet as we would for other patients and reduced weight. Did the thyroid help her reduce weight? No, for she kept on using thyroid and relaxed her reducing restrictions. She thought she would depend on thyroid, she leaned on the cane and the cane would not support her. Her weight went back up.

This patient has demonstrated what we have predicted repeatedly, that thyroid is an ineffective method of reducing weight, that it has little to offer, and it is only effective if thyroid dosage is pushed so high that we produce artificial thyrotoxicosis. I refuse to be a party to that technique of producing thyrotoxicosis in order to reduce excessive weight. She has shown by diet and treatment of myxedema that these two things must be thought of separately. I therefore recommend urgently that you do not use thyroid to reduce weight unless you have definite clinical evidence of hypothyroidism, separately from excessive weight.

Another type of obesity, almost a caricature of the human form, is a woman who is also diabetic. Did the diabetes produce the obesity or vice versa? Which is cart and which is horse? She had both when she arrived at the clinic. We do know, statistically speaking, that a great many diabetics and probably a majority of them, are obese at the time the symptoms of diabetes occur. That is not true of all diabetics. We do know another thing, particularly due to the work of Newburg and Conn at Ann Arbor, that long con-

tinued obesity leads to a reduction in the tolerance for sugar, which is the development of one type of diabetes. We know also, if such an individual can be persuaded to bring the weight back down to normal by dietary limitation, that the tolerance for sugar improves and all evidences of diabetes even determined by blood-sugar tolerance tests may vanish. We must think of obesity as an etiological factor in diabetes, but whether it is an endocrine mechanism or not, is still unexplained.

Case 3.—This patient shows another aspect of this problem of the pancreas, and its participation in sugar tolerance. This fat girl did not have diabetes, but quite the reverse. I would call attention to the blood-sugar curve. The relatively slight increase which occurred following a glucose tolerance test to a figure of 111 milligrams per hundred cubic centimeters one hour after the sugar was administered, and a drop to sixty-six three hours after the administration of this sugar breakfast. The mechanism which is involved in this rapidly descending blood-sugar curve produced obesity. She has the normal response to decreasing blood sugar which is hunger, and she was indulged and encouraged in the indulgence of her appetite by her parents, her grandparents and aunts, all of whom had seen an older sibling who was underweight and couldn't be made to grow. They fed this girl up and she became obese by unwise indulgence.

This is hypoglycemic obesity. The hypoglycemia is here merely a functional response to an excellent or better than normal tolerance for sugar. Whether it is because the patient has a pancreas that works overtime or whether it is because she has a storage mechanism that is greater, we do not know. But the sum total of her mechanisms for using sugar work so well that she has a functional hypoglycemia after meals and she gets hungry and goes to the pantry for cookies or candy or sandwiches. She reduced perfectly well on dietary control, but the next summer when she went to visit grandma again, grandma just couldn't believe the doctors were right so she filled her up and rounded her out. I think that is fairly frequent among the fat children we have to see, and it is an explanation for the hunger there.

What should we do with such a girl during that period of hypoglycemia and hunger? Shall we just say, "Steel yourself; don't touch a bit of food?" It works with some children but it will not work with a great many. The better thing to do is to give a little juicy fruit as a source of glucose, or a bit of hard candy—not chocolate—in order to give a little sugar and bring the blood-sugar back up and relieve the hunger. It is much easier to meet a physiological demand than it is to try to be iron-clad in discipline on such matters.

The next case shows the same hypoglymic type in an adult.

Case 4.—This woman, well past fifty years of age, with a very ungainly figure had exactly the same problem and was reduced by exactly the same kind of diet, losing 100 pounds. The repair of a hernia was the original complaint that brought her to the hospital.

The striking thing about these patients is that when we put them on a reducing diet, such as I shall describe, they lose weight and are more comfortable than on their usual diets. They lose the hunger between meals which was driving them to excessive food intake.

The secret of that kind of diet is merely the use of a moderate amount of carbohydrates at a meal rather than a large amount of it, cutting the carbohydrate content of the meals down to thirty to forty grams at each meal. The smaller amount of carbohydrates provokes less stimulation of the mechanisms by which sugar is stored and used and therefore provokes less hypoglycemia two to four hours after a meal, less hunger and less temptation, and therefore greater comfort in following the diet.

The next case is a boy who was a genuine case of adiposogenital dystrophy or the so-called Froelich syndrome. Adiposogenital dystrophy is something that I wish to expand on a little bit more.

Case 5.—This boy should have been showing definite signs of adolescence. The penis was small, the testicles were present but small; there was no axillary of pubic hair and no enlargement of the larynx. Adolescence was not so late that we could be sure it would not appear, but there had been no development. He had been treated with thyroid without benefit. He reduced very satisfactorily on diet control. He was given gonadotropic pituitary material to stimulate the growth of the genitalia and they have developed; but one of the very significant things about this picture is not the obesity, but the fact that this boy shows a wide pelvic girdle. The structure of his skeleton is of a typical sort, between the feminine and masculine types. He does not have the broad shoulders and narrow pelvis, which I consider far more important than the matter of obesity.

Let us consider two brothers.

Case 6.—These boys, twenty-four and twenty-eight years old, both suffered from infantilism. That is, they had very small testes and no pubic or axillary hair,

very little voice change and no palpable prostates. The younger one was long and lanky, his bones were abnormally long and his pelvic girdle was abnormally broad with reference to his stature. The same thing can be said of the older brother who had a slight obesity in addition. Here is genital dystrophy with and without adiposity in two brothers, who have the same problem.

Let me emphasize the remarks about the greater importance of skeletal proportions and skeletal development than of the obesity, which is only incidental and not necessarily concerned with the endocrine disturbance. This can occur even in women postpartum.

Case 7.—This woman had a reasonably normal figure as well as normal fertility until after pregnancy when misfortune overtook her. She developed a definite obesity. What made her fat after pregnancy, what made her have menstrual irregularity and lose her fertility after pregnancy—those are serious problems which we are having to face, but we are beginning to see light.

Case 8.—Another patient less obese, in addition to the obesity and some menstrual irregularity, had an interesting phenomenon—diabetes insipidus which occurred after pregnancy. These phenomena of obesity, disturbances in her fertility mechanism and disturbance in her water metabolism are all referable to the disturbances in the region of the pituitary, not just of the pituitary itself.

Silhouette drawings of the pituitary gland obtained by Sheehan, the British pathologist, from a series of women who died following a shock-like delivery occurring within the first day postpartum, are interesting. (Showing slides.) The black areas are infarcts. The stippled areas are old healed infarcts and the areas shown by stippled and black areas refer to cases that had two shock-like deliveries, recovering from the first and dying after the second one.

A very significant group of such patients that have been studied by Sheehan and other pathologists confirm this theory. It looks as though the association of the shock-like delivery with infarcts in the pituitary will give us the localization anatomically of something which can explain at least the menstrual irregularities and possibly also the diabetes insipidus as pituitary affairs. The diabetes is a posterior pituitary deficiency and not an anterior pituitary problem, and the infarcts are pituitary problems which are related to the fertility mechanism.

In a diagrammatic representation of this whole area taken from the work of the late Dr. Ranson of Northwestern, the pituitary is shown with the stippled area of the anterior lobe. Behind it is the posterior lobe, and coming down into the posterior lobe the fiber tracts which arise from the supra-optic nuclei in the hypothalamus. It is now known that diabetes insipidus may be caused by any one of these three general types of lesions: Complete destruction of the posterior lobe of the pituitary or the interruption of the fiber tract, completely cutting off the innervation of the posterior lobe, or destruction of the supra-optic nuclei in the hypothalamus.

Now, I would like to call attention to a further fact: there are other nuclei in the hypothalamus and those nuclei are associated with such factors as weight maintenance, temperature control, autonomic nervous activity. All of this area, the hypothalamus and the pituitary just below it, is relatively small.

With the evidence of postpartum infarction involving the anterior pituitary, with the known hypertrophy of the pituitary and the change in the circulation of the pituitary region during pregnancy, we are beginning to have the evidence of the anatomic localization for permanent disorders that can follow pregnancy. We think, therefore, that there is an anatomic disturbance in this area which has caused such things as obesity, obesity with menstrual irregularity and diabetes insipidus and other things which could not easily be shown by slides, the autonomic and, the temperature control disturbances which are seen in some patients postpartum.

We used to put such women down as simply neurotics—that they were nervously disturbed. The question is "why?" What happened to make them nervously disturbed when they were previously stable types? There is still a great deal of investigation to be done—we are getting into neurology, into the disturbance of a certain area in the brain intimately related to the metabolic problem, and I believe we are going to differentiate ultimately between these neurogenic and endocrine types of disturbances.

Case 9.—This young woman became obese six weeks after she had an acute cerebral illness. She had acute encephalitis and the only residual in her case after the first few weeks of this acute illness was sudden and intractable obesity. I said intractable because she was

not willing to go on a very thoroughly restricted diet in order to allow any decrease in weight to occur. She had no adiposogenital dystrophy and she had no evidence of endocrine disturbance. She represents that well-known tendency of encephalitis to cause permanent scarring in the basal areas of the brain. Sometimes it produces obesity and sometimes it results in aberrations in temperature control, et cetera, depending on which one of these nuclei in the hypothalamic area are permanently damaged.

I think that some of the congenitally obese types who find it so difficult to reduce have congenital deficiencies in the hypothalamic areas. That would be a hard thing to prove even by postmortem examination, but it is a realm in which research is needed, and it will become available as we get better measures of hypothalamic functions.

Case 10.—This patient presents the curiosity of short stature, obesity and primary amenorrhea. We think she represents a very uncommon type—absence of ovaries. It is not typical of adiposogenital dystrophy. Some of these girls do not have ovaries but they do have the rest of the features of the female. The skull of this patient shows a very small sella turcica indicating that she has a very small pituitary.

Case 11.—Another very uncommon type of obesity is basophilism. Besides the obesity, and the striæ on the abdomen, this patient has hypertension, and the alteration toward the other sex. This occurs in men as well as in women. In addition to the abdominal striation is a curious posture which is due in this case to compression fractures and decalcification of the back. As a matter of fact, there is no lost weight, simply lost stature, just telescoped on himself.

Case 12.—In this patient a diagnosis of basophilism was made, because she was obese and had too much hair, in rather masculine distribution. There was a very fine fuzz on her face. She was hypertensive, obese, lost her fertility and possibly had a basophilic tumor. We doubted it because after we treated her with reducing diet, gave her gonadotropic pituitary material which would increase her fertility, she became pregnant and went to term. She still has her hair although she brought her weight down.

Case 13.—This patient presents another curiosity. Fortunately, it occurs very seldom. The striking feature is the absence of obesity in the lower part of the legs and in the arms, with a terrific accumulation in the torso. This patient did reduce very satisfactorily on diet.

Case 14.—This patient, a very curious type, has a massive deposit of calcium in the frontal bone. There is nothing unusual about the pituitary in this case. The patient had a terrific accumulation of fat and likewise would respond very satisfactorily to dietary control. We don't know why there is an association of obesity with this hyperostosis of the internal frontal bone. Some of these patients do not become obese, some do.

Case 15.—Here is just a plain, common fat woman. I think she might benefit by a little plastic surgery, for the apron of loose skin with the small amount of fat that is left her would disappear in a few months on a reducing diet. Plastic surgery is a matter which is elective and not frequently needed.

Method of Reducing

How do we go about this reducing? It is a very simple matter and the details are to be found in most of the books on diet therapy. We use for these patients instructions made up of one sheet of paper folded into four pages, providing two different menus, the 1200-calorie menu and the 930-calorie menu. The 1200-calorie menu has about 125 grams of carbohydrates per day. The 930 has about 90 grams of carbohydrates per day. Both of these are prescribed in terms of simple portions. The portions are defined on the printed sheet in terms of spoonsful or slices and number of grapes and so forth, so that they are in simple measurements that anybody can use. There is no necessity for a scale and there are no unusual foods prescribed.

In this type of diet we have a very liberal breakfast. A great many patients say, "I don't eat that much," but they learn very quickly. We do insist on including in these diets everything which we believe necessary for the safe maintenance diet with the exception of fats and carbohydrate calories and with the exception of fat soluble vitamins, because we have curtailed the amount of cream and butter and milk.

The supper or lunch meal we use at noon or evening, depending upon the eating habits of the individual. Here again, the limited portions are defined in simple terms. We include some butter and some milk, and fruit with all the menus.

Dinner is the largest meal of the day. Those are ordinary meals except for the size of the portions. We use no pie, no cake, no cookies, no candy, no whipped cream, no salad dressings, nor other things like that.

I think it is important that the patient should be instructed on two things in addition to what is shown on such an instruction sheet: First, that they are to follow this diet until they reach a predetermined optimum weight which should be set for them. After this, they should follow

the same diet but add to it whatever other foods they desire so long as they do not regain weight. That regaining of weight is to be prevented by the use of judgment and selection of foods. These diets provide a skeleton of all that is necessary in protein, in minimum carbohydrates and minerals and vitamins, with the exception of the fat soluble vitamins. In order to insure an adequate intake of fat soluble vitamins, to prevent deficiency, I follow the routine of prescribing one capsule of vitamin A and D preparations daily. There is a great variety of such preparations on the market. They are being scaled down by acts of the government in the attempt to conserve vitamin A supplies, which are so necessary. In the near future, if not already, you will find the capsules of vitamins A and D coming to about five thousand units of A per capsule and about five hundred units of D. There will be some with ten thousand units of A and five hundred units of D, which gives an adequate maintenance dose of vitamins A and D for any adult or probably for any growing child.

There are some A and D in the diets as given. Patients are therefore given a little more than necessary to be certain we do not have a deficiency. It is easiest to do it in terms of a single capsule which is not expensive and does give the certainty of adequate diet.

These diets have been inspected and tested as to their adequacy in terms of the B complex and of C, and there is no deficiency which we can demonstrate there. We do not believe that such diets need any amplification with B complex or C, but we do feel they should have it with A, and I still feel certain that even an adult on a reducing diet should have a supply of D.

In conclusion, let me say again that the success which we obtain with patients, on reducing diets is largely in proportion to the conviction which we carry that the dietary control will work. Without dietary control, no successful reducing will be achieved except, of course, by the lazy individual who has just accumulated fat. He does not come to consult the physician about how to reduce. He finds that out from reading the newspapers.

MSMS

The Problem of Alcohol Addiction

Present-Day Therapy*

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The excessive use of alcoholic beverages is a problem that has baffled medical men for centuries and a review of the literature shows much confusion and unsatisfactory progress.

That a very large majority of alcoholic addicts present a picture of vitamin deficiency due to the fact that alcoholic beverages furnish calories, but no vitamins. The administration of large doses of synthetic vitamins B_1, B_2, Niacin, seems to bring about a rapid return to a state of well-being, meentally and physically. A study of one hundred-fifty cases have been gratifying and should be continued. Results from this ambulatory therapy seem as satisfactory as institutional care and will reach many more patients because of the inability of many to pay the cost of the sanitarium therapy.

■ TWENTY-FIVE years ago the student in most northern medical schools was taught that beriberi, scurvy and pellagra were diseases encountered only in the tropics and in some of our southern states. Many people in these southern areas lived on a sub-standard diet due largely to meagre circumstances and faulty dietary habits. Such teaching prompted the student who intended to practice in the northern states to regard the study of these diseases lightly, thinking he would never see them among his patients. For him, these diseases were practically non-existent since he might never be called upon to treat such conditions. Tropical medicine especially the above mentioned diseases, was taught only in southern medical colleges and in the Army and Navy medical schools.

Until recent discoveries of the rôle played by vitamins in our food, the medical schools of the north have been quite indifferent to the incidence of beriberi and pellagra-like manifestations. Considerable change in instruction has taken place as a result of these discoveries. Most physicians

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have become "vitamin conscious" and now recognize these diseases as a consequence of insufficient or improper vitamin intake or utilization.

Several years ago while serving as Medical Director for the Oakland County Emergency Relief Administration we became interested in the problem of alcoholic addiction and in going over the case histories of some one hundred and fifty patients, in the light of recent medical contributions, we discovered a significantly consistent pellagrogenic pattern in their diets. By far the greatest majority of alcoholics gave a history of irregularity in their eating habits and even of abstinence from food for long periods of time. Inhabitants of certain sections of the south became ill from a sustained, improperly balanced diet. Similarly, individuals who subsist largely upon alcoholic beverages fall heir to the same kind of illness, regardless of the region of habitation. Indeed, it would seem to make very little difference whether one patient starved in the south because of an economy of scarcity; or another, an alcoholic, starved in the midst of plenty of food.

Beriberi has been recognized and classified for many years, but few physicians suspected that it would be found among persons where all varieties of foodstuffs were available. However, a beriberi-like picture is presented to us by many alcoholics, particularly, in cases where there has been sustained and heavy drinking over long periods of time. Thus the symptoms described as alcoholic neuritis (neuropathy) has turned out to be early beriberi and the conditions may be relieved promptly by proper vitamin B therapy. That this condition is due to vitamin deficiency (B_1) there can be little doubt. Strange bedfellows, true, but partners nonetheless.

To quote Jolliffe:

"Alcoholic polyneuropathy and beriberi polyneuropathy is unquestionably due to vitamin B_1 (thiamin hydrochloride) deficiency. The onset of a peripheral neuropathy in the alcoholic is preceded by a period of neurasthenia which is the most common manifestation of early vitamin B_1 deficiency. As in the neurasthenia syndromes of any origin, the symptomology is varied but its outstanding symptoms are such complaints as irritability (gas), nausea, constipation, uncomfortable sensation in the abdomen and other parts of the body, depression, backache, headache (usually of the occipital or constricting band type), sighing, palpitation and precordial distress."[2]

The recognition of these symptoms by physicians caused many of them to administer large doses of vitamin B_1 to their alcoholic patients and was, as a rule, followed by favorable results. That vitamin B_1 therapy alone was not entirely sufficient, however, soon became apparent to us for it did not entirely clear up the symptoms described as "mental fog." "Many presented a picture of utmost confusion, disorientation, insomnia, nervousness (nervous fatigue), despondency and a lapse of memory which is classically similar to the mental picture found in pellagra."[6]

One case history cited by Sutton and Ashworth might serve as typical of many cases:

"During the night of February 10, the patient was found on the hospital grounds clad only in a nightshirt. When examined the next day, he exhibited a severe psychosis. The daily administration of 100 mg. of nicotinic acid intravenously and 400 mg. orally and 8 c.c. of liver extract caused rapid improvement."

The administration of relatively large doses of nicotinic acid hastens the recovery of the patient and is the method now in use by the above quoted writers as well as by Spies, Sydenstricker and Jolliffe. We have likewise employed large doses in treating alcoholic addicts. The administration of large doses of this synthetic vitamin is especially indicated during the first four or five days following the withdrawal of all alcohol with moderate doses of the vitamins continued for two or three months. Unless the alcoholic syndrome is eliminated, we feel that little can be expected in the way of stopping the apparent irresistible craving for alcohol.

"The theory that certain 'alcoholic' diseases result from nutritional deficiencies rather than from the direct toxic action of alcohol meets with little resistance. A vitamin deficiency or inadequacy is the modern explanation of the axiom that heavy drinkers who consume little food are subject to alcoholic diseases while those who eat well, and in whom assimilation is not impaired by gastro-intestinal disorders, seldom develop those diseases. Listed in the order of the weight of evidence in their favor, the following diseases of the alcoholic are now known as vitamin deficiency diseases —alcoholic pellagra, encephalopathy and Wernicke's syndrome (disease). In addition, experimental and clinical findings point toward a nutritional deficiency in Korsakoff psychosis, delirium tremens, acute alcoholic hallucinosis and fatty infiltration and cirrhosis of the liver, but no conclusive evidence has been adduced."[2]

The work of Alexander[1] on the relation of Wernick's disease to B deficiency is pertinent in this connection. About one year ago we decided to include the pellagra preventive factor (niacin) in the therapy used in all such cases of alcoholic addiction. Spies, in his treatment of pellagra, employs large doses of niacin, both intravenously and orally, giving as much as 1000 mg. daily. We have used various doses according to the severity of the individual case, with a minimum of 100 mg. daily to a maximum of 1000 mg. daily as deemed necessary. The results obtained in our last twenty-five cases seem to justify the continued use of niacin. "Alcoholic pellagra" is the best terminology to use to describe this syndrome. The disappearance of most of the mental symptoms within the short space of twenty-four to forty-eight hours justifies the further use of this synthetic vitamin. One patient very aptly described results from the use of this medication by saying, "The fog has lifted."

The appearance of cheilosis or fissuring of the lips in some patients and the typical symptoms of Ariboflavinosis (eyelids and tongue) caused us to include riboflavin (B_2) in our therapy and, as a consequence, we are now using the following: nicotinic acid, 100-1000 mg.; thiamin hydrochloride (B_1) 3-15 mg. riboflavin (B_2) 3-10 mg. daily in all cases presenting symptoms of chronic alcoholism.

The chronic alcoholic presents two problems for the physician which, while closely related, are really separate entities, namely: the acute symptoms of intoxication, which must be treated effectively if he hopes to get his patient under proper control and the one we have described as the deficiency state referred to as alcoholic beriberi, alcoholic pellagra and ariboflavinosis, which, for want of a better name, we call the alcoholic starvation syndrome. The following description of the therapy used in the acute stages and the reasons for such therapy are presented.

The alcohol addict is alternately subjecting himself to stimulation, or more correctly, to a pseudo-stimulation and depression and if this has been going on for months at a time, the continuation of the drinking of alcoholic beverages becomes many times an absolute necessity, in the mind of the addict at least. As physicians, we have been altogether irrational in our approach to this problem. We have been misled by the intoxicated condition of the patient into believing that all chronic alcoholics are psychopathic or mental cases. They are usually only mental cases in the sense that pellagrin is a mental case, due to the deficiency vitamin factor and to the state of alcoholic intoxication. Most of these individuals are loud, boisterous and exceedingly profane while under the stimulating or intoxicating stage of their drinking and for this reason some of us have been in the habit of prescribing narcotics or sedatives in the hope of quieting them. The harm done by the administration of depressants or sedatives at this juncture is not so apparent until after the effects of the drugs have begun to wear off, which is at about the same time, as a rule, as the stimulating effects of the alcohol. What we find then is a patient in the throes of a very depressed state, both mental and physical, crying out for relief of his condition. More sedatives merely act as palliatives for a few hours or until the effect wears off, thus further depressing an already greatly depressed and exhausted nervous mechanism. In the end, the patient resorts to self-medication with more alcohol to relieve his suffering. When we prescribe sedatives for patients suffering from the after-effects of excessive alcoholic indulgence, we defeat our purpose, that of relieving the symptoms, which are, depression, despondency, and extreme debility. We have used sedatives in but four or five cases in our last one hundred and fifty cases.

Alcohol when first taken into the body acts as a stimulant or pseudo-stimulant, both physically and mentally but proves later to be a severe depressant. Such a condition has been labeled as the "hangover," quite generally among drinkers. This has been well established and we are confronted with the question as to the best method of treatment for relief of such a person. Many treatments have been tried and none have met with universal adoption as entirely satisfactory. The alcoholic in his desperation resorts to self-medication and takes another drink which he has come to know from past experience will bring some temporary relief from his suffering. If he isn't fully aware of this he can usually secure advice from fellow drinkers who tell him to "Let the same snake bite you that bit you the night before," or some such advice. This does not alleviate the symptoms and as a rule leads to a continuous drinking habit. We believe that many of these patients are merely attempting to restore themselves to normality by such self-med-

ication and do not foresee the deterioration that is inevitable. Self-medication reminds us of the old saying—"He who treats himself has a fool for a patient" and nowhere else could this be better exemplified. Sedatives having a depressing effect on a patient already severely depressed, caused us to search for some other method of relief where stimulation seemed to be indicated. In selecting a stimulant, strychnine seemed to be a logical choice because its action is similar to that of alcohol and especially because of the rapidity with which it acts.[9] Another drug that has been very largely discarded in favor of digitalis is strophanthus. This drug enjoyed great popularity among physicians many years ago as a rapidly acting heart and muscle stimulant. It has the advantage of quick action and of rapid elimination with no accumulative effects noticeable.[9] We have used tincture of nux vomica combined with tincture of strophanthus in small repeated hourly doses and the results have warranted its continued use. The doses employed were as follows—tincture of nux vomica, U.S.U. min. IV and tincture of strophanthus U.S.P. min. II, administered in water every hour.

In a great majority of the patients we have had under observation, the desire for liquor has been markedly decreased, with many of them stating that they "Did not feel the need of a drink." We regard such therapy as "substitution therapy" and continue its use for several days after the acute symptoms have subsided. A most gratifying observation is the rapidity with which the patient returns to a more or less normal condition, mentally and physically, and to the fact that institutional care has not been necessary in a large majority of cases. Usually this improvement occurs within twenty-four hours, especially since we have combined intensive vitamin therapy with this stimulation therapy. The only contraindication to the use of strophanthus would be in cases that are digitalized. The drug should not be used until at least seventy-two hours have elapsed after stopping digitalis. Such instances are rare and not often seen among alcoholic addicts. It is well, however, to keep such a possibility in mind.

"In moderate doses strophanthus has the same, but a more marked effect on the heart as digitalis, stimulating the tonic contraction of the cardic muscle, increasing the force of the ventricular systole, prolonging the diastole, slowing and regulating the rhythm, and causing a pronounced though slow rise in the arterial pressure by the increased force in the cardiac contractions —there can be no question that it does have the effect of slowing the rate of the heart, apparently the result of direct cardiac action.

"Strophanthus is an efficient diuretic, increasing the quantity of urine not only in instances of cardiac disease, and influence is apparently exerted not by it, but also through direct action upon the secreting structure of the kidneys. Elimination and absorption—since strophanthus is soluble in less than its own weight of water, it gives prompt results. The active principle of strophanthus escaped with the urine, so that we have ready elimination."

"Strychnine by stimulating the vasomotor center, produces constriction of the arteries, thereby causing a rise of blood pressure, which is augmented by the increased peripheral resistance arising from the general activity of the muscle. The pulse is also slowed by the stimulation of the vagus center in the medulla. The action of nux vomica is an admirable stomachic bitter. In the gastric catarrh and morning vomiting of drinkers it is considered of value."[9]

Tincture of nux vomica has a similar effect upon the central nervous system as does alcohol. These drugs combined exert a stimulating effect upon the patient which seems to inhibit the desire for alcohol and alleviate the accompanying "let down" feeling in such cases. The troublesome tachycardia and bradycardia seem to be kept under control and the patient feels more at ease following the administration of these drugs.

We believe that many persons start drinking as a social matter entirely and continue for varying lengths of time depending upon the individual himself, his temperament and environment. As he progresses from the social drinking stage to that of more or less steady drinking, we find that, as a rule, he eats with greater irregularity, bringing upon himself gradually a state of avitaminosis with its attendant nervous manifestations, and when such a state is reached the drinking becomes almost a necessity if he wishes to maintain some semblance of well-being. It is then that he finds himself in the alcoholic addiction stage where vitamin therapy would seem to be necessary to restore him to a normal physiological condition.

After the patient has been restored to a normal physical condition which requires a month or more of observation and treatment we are convinced that he should readjust his social life in such a way as to reduce the chances of reverting to his drinking habits. As a result of this rea-

soning, we have endeavored to persuade our patients to join the movement known as "Alcoholics Anonymous" where they are assisted in keeping from drinking by associating with men who have developed a remarkably simple philosophy in regard to drinking. We feel that these groups contribute greatly to the social rehabilitation of these patients.

The following cases are presented out of a series of seventy-five, treated since beginning the use of massive dosages of synthetic vitamin therapy:

Case 1.—G. F., aged thirty-nine male, white, married, two children, occupation, laboratory technician. He has drank alcoholic beverages since he was eighteen years old. During prohibition era drank "moonshine" and "home brew." He *has* had periods of sobriety and would be classified as a periodic drinker with periods of sobriety becoming shorter and fewer as the years go by. The family physician was frequently called to the home to quiet him with morphine and sedatives. He has been taking barbiturates himself to obtain some sleep. He would awaken following taking barbiburates "feeling terrible." Tachycardia was noticed at frequent intervals. Physical examination was essentially negative with the exception of the reddened and smooth tongue with few scattered patches of papillae. He first came to the office on June 14, 1941, presenting a typical picture of the after-effects of alcoholic excess, namely, anorexia, lassitude, despondence, disorientation, with vagueness as to events that transpired within the last few days.

He stated that he had been drinking excessively for several weeks, hadn't been eating regular meals and could not sleep without taking phenobarbital in doses of 3 to 6 grains every night. His wife stated that he had been melancholy, morose and ugly for weeks. He drank from twelve to eighteen bottles of beer daily with an occasional pint of whiskey besides. This patient was given medication as follows: Tr. of nux vomica, M-IV, and Tr. of strophanthus, M-II, in one ounce of water every hour and niacin mg. XXX, thiamin hydrochloride mg. I and riboflavin mg. I, after meals. June 15, 1941, he came to the office stating that he felt better and had eaten fairly well that day. Advised to continue medication and return in twenty-four hours.

June 26, 1941, he returned to the office for more medication at which time the dosage of the synthetic vitamins was reduced to twice per day. Stated he felt better, not so nervous and slept much better. Still working until after midnight trying to catch up on his work. More cheerful and looked much better than at time of first visit. We advised him to take two or three days' rest from work. June 28, 1941, stated that he was completely exhausted when he gets home every night, but he had no desire for a drink of liquor. Slept soundly.

January 30, 1942, he returned to office with a history of having been drunk since New Year's Eve, when he thought one or two drinks would do him no harm. He had been abstinent since June 14, 1941. He was given the same medication as previously described and made an uneventful recovery. Hadn't had anything to drink since. He was advised to attend a meeting of "Alcoholics Anonymous" on February 4, 1942, and is still attending these weekly meetings.

Case 2.—E. M., aged thirty-five, male, white, occupation, truck driver, married, two children, steady drinker for ten years. Eating habits irregular and at times will eat nothing for several days. Apprehensive about death, confused, melancholy, cannot sleep or sit still for any length of time. Constipated, tongue red and smooth with other physical findings essentially negative. Started taking strophanthus and nux vomica with viatamin B-I, niacin and riboflavin T.I.D.

March 30, 1941. Feels and appears better, eats and sleeps well, not as nervous. Doesn't feel like taking a drink of liquor.

April 4, 1941. Contracted an acute upper respiratory infection but didn't feel like taking a drink. Recovered in three days and returned to work. Feels fine with good appetite. Sleeps much better than he did but still a little restless. Bowels regular. Took medications one month. June 20, 1941. Wife came to office reporting that he is working hard and feels good. Restless when over-tired. Still taking vitamin B Elixir in decreased amount. Hasn't taken a drink since March 28, 1941.

October 7, 1941. Wife reports he is feeling well and hasn't taken a drink since March 28, 1941.

April 15, 1942. Hasn't been drinking at all.

We could present numerous case histories but they all confirm to much the same pattern. The lack of proper dietary habits is uniform in all these alcoholics, both as to regularity and selection of foods.

We wish to add the following to what has been said previously in this article and that is—the patient should have a real desire to quit drinking if we are to achieve satisfactory results. There is no magic formula that may be called an "Alcoholic Cure." The entire problem of alcoholic addiction should be treated or considered as a medical problem or physiological problem rather than a psychiatric one. Altogether too much emphasis has been placed upon the psychiatric approach and it would seem that some steps should be taken to provide hospital facilities for these unfortunates other than the jail, insane asylum, or almshouse. The State has a definite interest in the problem of alcoholism and should take a more constructive and realistic attitude toward these patients. The State Liquor Control Commission,

the National Distillers Association and other agencies should do something tangible to rehabilitate these addicts.

Summary

1. Chronic alcoholic addicts have a condition, known as beriberi, pellagra, riboflavin deficiency, labelled "alcoholic starvation syndrome."

2. These patients, in addition to nourishing, vitamin rich food, need additional amounts of synthetic vitamins, namely, thiamin hydrochloride, niacin, and riboflavin in relatively large doses.

3. Commercial drug companies do not manufacture a B-complex preparation containing adequate dosage of nicotinic acid. The preparation we have used was compounded locally from synthetic niacin, thiamin chloride and riboflavin.

4. The avitaminosis encountered in alcoholic addicts far overshadows any other factor from a therapeutic standpoint.

5. Stimulation therapy proves more efficacious than sedatives in the acute "hangover" stage of the disease.

6. Alcoholic addicts should be considered as physiological problems, rather than psychiatric problems as has been too often the case in the past.

7. Social readjustment should be attempted as a follow-up course of therapy with psychotherapy being called into play as a follow-up measure only.

8. Institutions other than jails, asylums or almshouses should be established to treat alcoholic addicts.

9. There is no so-called "cure" for alcoholic addiction. The patient must have formed a desire to quit before any treatment has a chance of succeeding.

10. "Alcoholic Anonymous" organizations should be given a chance to reorganize the patient's social life.

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The Radiocurability of Neoplasms*

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The degree of radiosensitivity of neoplasms has played a major role in radiation therapy, a role which may have been overemphasized. Equally important are the radioaccessibility of the neoplasm and its radioliability. Often emphasis of one of this important triumvirate of factors to the neglect of another results in complete failure of the treatment. Radioliability is a term used by the author to designate the patient's tolerance to the therapy and its effect upon both diseased and adjacent tissues. It is concluded that radiosensitivities, determined by means of serial biopsies of irradiated tumors, coördinated with critical studies of the size, location, extension and liabilities of these tumors will yield the only accurate solution to the problem of whether a neoplasm is amenable to treatment by irradiation.

■ The question of whether a neoplastic tumor can be destroyed or even influenced by radiation therapy is usually postulated on that particular tumor's radiosensitivity, when as a matter of fact the *radiosensitivity* of neoplasms is only one aspect of a three-dimensional picture. Equally important are the *radioaccessibility* of the neoplasm and what I like to call its *"radioliability."* Each individual neoplasm must be viewed from all three of these aspects; all must be given equal consideration. Emphasis of one to the neglect of another when estimating the efficacy of radiation therapy can and often does result in complete failure of the treatment.

The degree of radiosensitivity of neoplasms is a quality which has played a major rôle in radiation therapy, a rôle which may often have been overemphasized. Radiologists know that

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radiosensitivity and radiocurability are not necessarily parallel. For example, enlarged lymph nodes of lymphatic leukemias disappear under treatment with small doses of x-rays, but frequent recurrences and the appearance of new tumor growths place these neoplasms low in point of curability. Also there are many neoplasms which must be irradiated and observed for a period of days before their degree of sensitivity becomes apparent. In these instances radiosensitivity, as determined by cell study, failed to serve its most useful purpose; that is, as an aid to deciding before treatment what type of radiation therapy will be best.

As a consulting biophysicist I have had the privilege of participating in tumor clinics, both in this country and abroad. Frequently the recommendations of these clinics and the decisions made regarding the treatment of cancer patients appeared to be based entirely on the radiosensitivity of malignant neoplasms. Accessibility and liabillity were usually left to the judgment of the radiation therapist, which in itself is not objectionable because the therapist should best be able to estimate these factors. However, all members of the clinic should appreciate their significance and importance. Occasionally radiation therapy is withheld from a patient because his neoplasm is supposedly "radioresistant," despite the fact that no other type of therapy is indicated. What is equally serious and what perhaps happens more often is the administration of sublethal doses to neoplasms because they were pronounced "radiosensitive" and therefore assumed to be easy to destroy. Possible cures, or at least palliative treatment allowing indefinite periods of useful living, are thus lost to these patients.

There are two main reasons for the apparent emphasis on the radiosensitivity or radioresistance of neoplasms: First is the misunderstanding of the limitations of radiosensitivity and lack of full appreciation of the significance of other radiological factors. Second is timidity in administering the radical radiation therapy which is often necessary. Individual members of tumor clinics also place different interpretations on the term "radiosensitivity." Pathologists estimate the degree of sensitivity of a tumor to radiation on the basis of neoplastic cell type and growth characteristics, while surgeons and internists are apt to think more of host-tumor relationships and the concurrent pathological effect which the neoplasm may have had upon the patient. Radiologists, being responsible for the administration of radiation therapy and its biological results, must consider still another factor; namely, the individual doses and total amount of radiation that will be required to destroy the neoplasm. Each of these viewpoints is essential and should be correlated, but to categorize all of them under "radiosensitivity" is objectionable.

Radiosensitivity

Radiosensitivity is the quantitative specification of the penetrating radiations (roentgen rays and radium rays) required to inhibit the growth and functional activity of living matter. Originally the term was used with reference to minute particles of tissue, as the eggs of Drophilæ flies or of Ascaris worms, and to the cells of normal or malignant tissues growing in culture. Absolute units of sensitivity were not established, but cell types were classified in ascending or descending degrees of radiosensitivity. The fact that the cells were isolated affixed the original implications of the term to the cells themselves and by connotation eliminated all reference to environmental influences. This concept of radiosensitivity might be termed the "inherent" radiosensitivity of cells.

Inherent radiosensitivity depends upon type, growth characteristics and the physiochemical structure of cells. The latter has no conclusive experimental proof but has some theoretical support. On the other hand, type and growth characteristics are well-known factors and may be demonstrated both in the research laboratory and in the clinic. Lymphoid cells are probably the most radiosensitive of all cells in the human organism. At the opposite end of the scale are nerve cells. Epithelial cells, especially of the testes, ovaries and salivary glands are in general more radiosensitive than are connective tissue cells.

The growth characteristics of cells, both normal and neoplastic, constitute good criteria for their response to irradiation. Adult cells which do not undergo multiplication, such as brain and muscle cells, are not radiosensitive. Very large doses of radiation are required to destroy them. Red corpuscles in the blood vessels may be exposed to large doses of radiation without destruc-

tion, but if bone marrow is irradiated, the young stem cells are destroyed and anemia occurs. The potential germinating ability of a dormant wheat seed is unaffected by tremendous doses of roentgen rays, while "damp" seeds will not germinate following erythema doses of the rays. Cells in active states of typical or atypical mitosis are radiosensitive.

The radiosensitivity of a neoplasm is the inherent radiosensitivity of its cells only at the time of their origin; that is when a single cell or cells of different types acquired abnormal reproductive and functional characteristics. Very soon thereafter the neoplasm may become a complex structure of many types of cells, some of which may resemble normal tissues. The structure and function of these tissues may be modified by physiological processes of the host. Defensive mechanisms of an inflammatory nature are instigated and the neoplasm may become encapsulated by connective tissue. All of these growth manifestations influence the radiosensitivity of the tumor.

The grading of malignancy by estimation of the proportions of undifferentiated and differentiated cells within a tumor is used as a basis of judging radiosensitivity. Well differentiated neoplastic cells grow slowly; the tumor may contain relatively large amounts of connective tissue. The organism demonstrates abundant defense against this type of growth. The differentiated cells of such a tumor may appear normal, both physically and functionally. These cells are in general not radiosensitive. Undifferentiated cells, on the other hand, are fairly radiosensitive. They grow rapidly and retain embryonal characteristics. The organism is unable to defend itself against this type of growth and little connective tissue is produced.

The relative proportions, therefore, of differentiated and undifferentiated cells within the neoplasm aid in estimating its radiosensitivity. These proportions are not easily determined, however. They vary at different times in the same portion of a neoplasm and are different in different parts of the neoplasm at the same time. The change with time is probably always in the direction of increasing proportion of undifferentiated cells; that is, toward higher degrees of malignancy as time goes on. Histologic grading of malignancy is a rather subjective interpretation and therefore is prone to variations. Also the morphological examination of biopsy material is not, for the reasons previously stated, a positive means of estimating a neoplasm's radiosensitivity. Perhaps at the present time serial biopsies of selected irradiated tumors are the most reliable method of determining radiosensitivity. Biopsy, however, is recommended for every case of cancer when possible. It provides surprisingly accurate information regarding the nature of tumors and serves a very practical purpose. The information thus obtained has additional academic interest and statistical value.

The type and functional activity of normal tissues around a neoplasm also have an effect upon its apparent radiosensitivity. Highly vascular growths are more radiosensitive than are neoplasms with poor nutritional supply. In fact it may be inferred that tumors which are able to exist in a restricted and opposing environment might also be more able to withstand the attack of outside agents. The rapid "melting away" of a neoplasm undergoing irradiation may not be due so much to the radiosensitivity of the malignant cells and their direct destruction but more to injury of the vascular system of the tumor. The neoplastic cells are actually "starved" to death. This phenomenon partially explains the apparent radioresistance of some tumors following irradiation. The treated tumor lives in a new environment which is less susceptible to irradiation. Badly infected tumors and those associated with other inflammatory processes require, in general, more radiation to inhibit their growth.

Radioaccessibility

The second important factor influencing radiocurability is radioaccessibility. By this is meant the degree of assurance, in clinical estimation, of the extent of the neoplastic involvement and the degree of freedom and accuracy which can be exercised in the physical application of the radiation. If adequate radiation cannot be administered uniformly to the entire neoplastic tissue, then there is little likelihood of cure, regardless of how favorable the other factors may be. The radiation therapist must destroy all neoplastic cells for the same reason that the surgeon must remove all neoplastic cells at the time of surgery.

The extent of neoplastic involvement cannot be determined with complete assurance. Therefore the question of size of x-ray field and volume of

irradiated tissues arises in the treatment of even the most well-defined neoplasms. A good rule is to include normal tissue well beyond the estimated borders of the neoplasm. Every student of cancer knows that some neoplasms are better demarcated than others, and that the degree of demarcation sometimes changes with time. Neoplasms which are non-infiltrative in their growth characteristics are in general better outlined than the infiltrative type.

The non-infiltrative tumor enlarges, centrally or peripherally, by proliferation of neoplastic cells which become encapsulated by fibrous tissue. Thus the tumor tends to remain localized and movable. These tumors are usually spherical in form and are visible and/or palpable. As long as the tumor remains encapsulated its size and extent can be estimated fairly well, but when neoplastic cells break through the capsules and invade surrounding tissues, the tumor becomes fixed and loses all lines of demarcation. Examples of these non-infiltrative neoplasms are Wilm's tumors, hypernephromas, mixed tumors of the parotid gland, malignant adenomas of the thyroid gland and lymphosarcomas.

The infiltrative type of tumor disseminates neoplastic cells into lymph spaces and vessels. In the process normal tissue is destroyed and replaced by neoplastic tissue. This type of neoplasm does not become encapsulated and there is no sharp demarcation from normal structures. Its presence is made known by ulceration and hemorrhage. Carcinomas and melanoblastomas are examples of the infiltrative type of neoplasm. They are relatively not radioaccessible.

Estimation of the extent of neoplasms, whether infiltrative or non-infiltrative in type, is further complicated by local extension and metastasis. The neoplasm may metastasize by way of the lymphatics, either by continuous expansion from the local tumor or by fragmentation and deposition in the nodes. Also fragmentation may be transmitted through the blood stream to remote areas. In either case the radiological problem is complicated first by lack of knowledge of the complete extent of involvement and second, by the need of extensive irradiation.

The freedom and accuracy possible in applying the radiation depends upon the size and location of the tumor. Skin cancers are readily accessible. There is no physical difficulty in directing the radiation to the tumor, and since skin cancers usually are not thick or bulky, uniform irradiation of the entire tumor mass is assured. On the other hand, lymphosarcoma of the stomach may grow to large dimensions and, being deep-seated, present difficulties in the directing of x-rays and in the administering of uniform doses to all parts of the neoplasm. Such neoplasms are radiosensitive but not radioaccessible. Tumors of the lip and anterior portions of the oral cavity are accessible; those farther back in the oral cavity are less accessible. Early cancer of the cervix uteri which has not invaded neighboring tissues is radioaccessible. Cancer of the corpus uteri is less accessible. In general, neoplasms which can be seen without the aid of special optical instruments, which are sharply demarcated, and which have not metastasized are radioaccessible; the hidden non-distinct types with regional metastases are not radioaccessible.

Radioliability

Finally, the radiocurability of neoplasms is affected by the radioliability of the patient. The treatment of tumors by radiation entails a likelihood of damage to normal organs and vital structures adjacent to the tumor, and thus subjects the patient to varying degrees of undesirable physiologic reactions. If there is danger of severe and permanent damage, and if the patient's health cannot withstand the additional shock of therapy, then the tumor is highly radioliable. Thus tumors of the liver, kidneys and stomach have high degrees of radioliability. Radiation sufficient to destroy the neoplasm might also destroy the vital functioning of these organs. Moreover, such patients are usually critically ill before therapy is instigated.

Organs not involved by the neoplasm but close to it may also be injured. Irradiation near the eyes may result in loss of vision through production of cataract. This possibility is mentioned frequently and carefully guarded against, although proven cases of radiocataract are rare. Permanent sterilization of the ovaries or of the testes by irradiation of tumors in the pelvis may prove to be a liability not welcomed by the patient. Late strictures of the bowels or of the ureters following radium therapy of gynecologic tumors might be regarded as radioliabilities.

The physical status of cancer patients often will not permit the additional strain on the system incident to radiation therapy. Many are

anemic, cachectic and emaciated. The poor elimination of disintegrated tumor tissue by irradiation adds to the already toxic condition of the ill patient. These are liabilities which may preclude any type of therapy, either palliative or curative.

The relative weights of radiosensitivity, radioaccessibility and radioliability have not been clearly demonstrated. Investigations have not been undertaken primarily to solve this problem. Tables on the cure of different anatomical types of cancer, however, present some interesting confirmations of the importance of these factors. In 1940 Ewing[1] published a comprehensive table of the comparative cure rates for cancers, including reported cases up to 1931. In this table the percentage of cures is listed for each anatomical type regardless of the method of treatment. Treatment included surgery, radiation, and surgery plus radiation all grouped together. This does not preclude reference to the table here because the cure rates for radiation therapy alone probably would present the anatomical types in the same or very nearly the same order in which they appear in Ewing's table.

According to this table, lip and skin cancers show the highest rate of cure for selected cases, the rates being 80 per cent and 70 per cent respectively. This is twice as great as the next highest type. Carcinomas of the lip and of the skin are relatively radioresistant neoplasms, but they are most radioaccessible, and intensive treatment involves very little liability to the patient. Thus in these neoplasms, radioaccessibility is the major factor in their cure. Radioliability is next in importance and radiosensitivity ranks least.

At the very bottom of the cure rate chart are tumors of the pancreas, lungs and esophagus, with cure rates of less than one per cent. Pancreatic, lung and esophageal cancers are probably no more radioresistant than skin cancers. The low rate of cure must therefore result from the fact that they are not accessible and are highly radioliable.

Lymphosarcomas are among the most radiosensitive neoplasms. Yet the cure rate of lymphosarcoma is only 5 per cent. The inference is that these neoplasms are seldom cured by radiation therapy because they are either highly radioliable or highly inaccessible or both. The conclusion is surprising because many lymphosarcomas appear as discrete tumors, easily outlined and often easy to irradiate.

Discussion

It is not the intent of this paper to disparage the attention given to radiosensitivity in the past, but rather it was written in the hope that in the future more attention may be focussed upon other factors which also influence the radiocurability of neoplasms. Comparisons of the radiosensitivity of different types of neoplasms may not provide so much useful information as might come from comparisons of the differential radiosensitivity of neoplasms and their environment; that is, the sensitivity of normal tissues in and around the tumor masses. The differential sensitivity of surrounding normal tissues is used in a few instances to arrive at a prognosis in special cases. For example, in the modified Coutard method of treating carcinoma of the larynx, if the skin over the larynx shows radiation reaction before the appearance of a "radioepithelete" of the mucous membrane of the mouth and throat, then the cancer usually is radioresistant and the prognosis is poor. If the reactions appear in the reverse order, the prognosis is better.

Radiosensitivities, determined by means of serial biopsies of irradiated tumors, coördinated with critical studies of the size, location, extension and liabilities of these tumors will yield the only accurate solution to these problems.

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It is good practice to place a felt pad over the common peroneal nerve before applying a skin tight cast—foot drop may be thereby prevented.

* * *

Extreme degrees of bow-leg are easily treated by an osteotomy of the tibia.

* * *

It is advisable to get check-up x-rays seven to ten days after reducing most fractures.

* * *

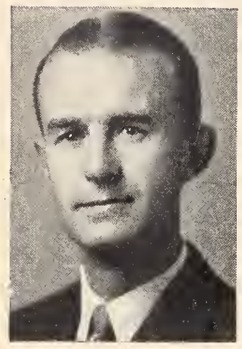
Acute septic arthritis of the hip may simulate abdominal disease.

EUGENE M. SECORD, M.D., Detroit.

The Treatment of Psoriasis

By Louis A. Brunsting, M.D.

Rochester, Minnesota



Consultant in Dermatology and Syphilology, The Mayo Clinic and Associate Professor in Dermatology and Syphilology, The Mayo Foundation, University of Minnesota Graduate School at Rochester, Minnesota. Born July 7, 1900, at Grand Rapids, Michigan; attended John Calvin College and Grand Rapids Junior College; M.D. in 1924, University of Michigan; intern at Blodgett Memorial Hospital, Grand Rapids, and practiced in Nashville, Michigan, for nine months. Entered the Mayo Foundation as a Fellow in Dermatology and Syphilology April 1, 1926, and received the degree of M.S. in Dermatology and Syphilology in 1929 from the University of Minnesota. Member of American Dermatological Association, American Academy of Dermatology, Society for Investigative Dermatology, Minnesota and Chicago Dermatological Societies.

From time to time, new fields of research awaken spurts of interest in the etiology and treatment of the age-old, baffling problem of psoriasis but most of these trails soon reach a dead end. Aside from its nuisance value and psychologic handicap to adolescents, psoriasis may cause real concern when the eruption is generalized or when it is associated with disabling complications such as psoriatic arthritis. In this latter condition there is usually a characteristic pattern of involvement and the management is of interest to dermatologists and internists alike. Lacking a cure for psoriasis, we find it important, especially in the widespread and complicated cases, to be able to offer a method of control which is efficient and economical. This is accomplished by the use of the Goeckerman regime which consists largely of inunctions of crude coal tar ointment and ultraviolet irradiation. The details of the technique which assure a favorable response in most instances are elaborated by colored motion pictures.

■ Psoriasis is one of the most common diseases of the skin and the important points in its natural history are matters of common knowledge.[10] From time to time contributions of research in various fields of laboratory and clinical medicine have thrown light on dermatologic problems but in regard to the etiology of psoriasis we are as much in the dark as ever and its treatment still rests on an empiric basis.

Psoriasis usually begins at the time of puberty and persists with remissions and relapses until early middle life. It is rarely seen in early childhood or in the aged. The condition is a cosmetic disfigurement, a psychologic handicap in the impressionable years of adolescence. In the more severe forms, which may lead to exfoliative dermatitis, there may be actual disability, and in about 15 per cent of the cases there is associated arthritis of a characteristic pattern which often runs a clinical course of activity that is parallel to the course of the eruption on the skin. There is a hereditary predisposition toward psoriasis; in some instances, numerous members of the same family are involved; in about 25 per cent of the cases there is a record of familial incidence of the disease.

The average patient who has psoriasis appears to be in good general health; in fact, a plethoric constitution is the rule. In some instances there is evidence of lipemia or other disturbance of the metabolism of fats, and whether this is a part of the disease or is coincidental has been the subject of debate for the past decade.[3] It is generally agreed that a reduction of the caloric intake by obese patients and a reduction in the intake of fat in general is helpful in the management of psoriasis.[6] Methods have been applied which are designed to assist in the metabolism of fats by the administration of lipocaic[8] or the saponins of sarsaparilla,[9] but the value of these procedures is questionable.

The three empiric remedies that long have been associated with the treatment of psoriasis are the administration of arsenic, the use of roentgen therapy and the application of crysarobin to the skin. Each has its disadvantages, and in the case of the first two the hazards and possible sequelæ outweigh any temporary benefits that may accrue from their use. A prominent feature of the natural history of psoriasis is that the disease often tends to clear up spontaneously after a period of warm weather, particularly after exposure of the skin to sunlight or artificial ultraviolet irradiation. Since a permanent cure for psoriasis is lacking, in the light of present knowledge, I believe it is desirable to emphasize a method which is effective in controlling the disease in almost every instance in which it is properly carried out. It is my purpose in this paper to call attention to the technique of the combined use of crude coal tar by inunction and of ultraviolet irradiation, a procedure first elaborated by Goeckerman.[1,2]

This treatment is best carried out with the patient in the hospital or in a rest home, but it can be adapted to ambulatory patients. For the average patient, a period of from two to four weeks is required and no doubt the rest, regularity of routine and the patient's lack of responsibility which are obtained in the hospital are important points in control of the spread of the lesions

*Read at the Seventy-seventh Annual Meeting of the Michigan State Medical Society, at Grand Rapids, September 25, 1942.

and in their resolution. The treatment is not a cure, and there is no assurance against recurrence; the period of remission after treatment varies with the individual patient from months to several years. Except when the disease is present in the most acute forms, the treatment can be applied to all stages of it, even when there is exfoliative dermatitis. As a rule, best results are achieved for those who tan readily and poorest results are obtained for blonds and red-haired persons who burn and do not tan. Treatment is best carried out by means of a full-time program of intensive application to treatment for two to four weeks once or twice a year, rather than use of the method in a desultory manner at bedtime, when it is convenient, now and then, for a long period. A combination of the use of the tar ointment and the ultraviolet light is more effective than the use of either procedure by itself. There is evidence which indicates that a change is produced in the tar by ultraviolet irradiation,[5] and perhaps this altered substance is responsible for the therapeutic effect obtained. It is advisable to use the tar ointment over wide surfaces of the body before irradiation, even when the patches of psoriasis are limited to a few isolated points; better results are obtained by such a technique than when the patches alone are treated.

Such treatment exerts no direct effect on psoriasis of the nails, for which condition other measures can be employed, but often there is noted an improvement in the affected nails several months after the skin has been cleared by this method of treatment. The tar cannot be applied very well in general to the scalp, excepting where the hair is thin, but it can be incorporated into olive oil after it first has been dissolved in a small amount of benzol.

If the technique of treatment is carried out with attention to details, beneficial results occur with few exceptions. Response to treatment is slow among those who do not tan well, those who have severe involvement of the scalp and nails, those who have heavy lesions of the palms and soles, those who have exceedingly infiltrated plaques and those whose skin has been tanned recently by exposure to sun or ultraviolet light without influence on the lesions. Supplemental procedures to treatment include the injection of whole blood, restriction of the amount of fat in the diet and, occasionally, the administration of large doses of vitamin D, especially when the involvement is universal or when psoriatic arthropathy is present. The latter condition will be discussed herein in detail later.

Technique of Treatment.—White's crude coal tar ointment in a strength of from 2 to 6 per cent is used generally, excepting on the scalp and nails, where an ointment containing from 10 to 20 per cent ammoniated mercury is used. To the latter ointment 5 to 10 per cent salicylic acid may be added if there is heavy scaling of the scalp. The addition of salicylic acid to the tar ointment is not feasible because it interferes with penetration of the ultraviolet light.

Upon admission, the patient is thoroughly bathed with soap and water to soften and facilitate removal of the scales from the affected parts. The trunk and extremities are thoroughly anointed with the tar ointment after the bath, and suitable clothing is provided, such as loosely fitted underwear, pajamas or a fashioned covering of gauze. At bedtime additional ointment is applied to the body and scalp where needed.

The next morning the tar ointment is smoothed with an oil, such as olive oil or cotton seed oil, to the consistency of a thin film over the entire body. At this stage irradiation with ultraviolet light is carried out daily in increasing dosages, according to the patient's tolerance, while at each irradiation a thin film of the tar ointment remains on the skin. The amount of exposure depends on the voltage of the lamp, the age of the burner and the reactivity of the patient's skin. It is desirable to secure a brisk erythema short of an uncomfortable burn. Infiltrated plaques and the scalp may be subjected to more intensive treatment by protection of the surrounding skin by paper or cloth, but it is essential to irradiate the entire surface of the body.

After the ultraviolet treatment, a bath and shampoo again are in order and the ointments are reapplied. In the case of ambulatory patients, inunction can be deferred until bedtime.

Psoriatic Arthritis.—It is becoming increasingly apparent that a considerable proportion of psoriatic persons also are subject to involvement by a form of arthritis which has a characteristic pattern and a clinical course (at least in the early stages) which parallels the degree of activity of the lesions on the skin.[4] The association is more than a coincidence. In affected persons psoriasis usually, but not always, has been present for months or years before the onset of the arthritis. The most common site of involvement in the early stages is the terminal phalanges of the fingers or toes; gradually the larger joints may become involved, even the spinal column, and when the disease is advanced, the picture may resemble that of arthritis deformans. The earliest

changes usually appear as red, tender swellings of the soft tissues around the smallest joints of the fingers and toes. One joint may be affected or there may be multiple sites of involvement. If the psoriasis subsides spontaneously or under treatment, there is often complete remission of the symptoms in the joints, but with succeeding episodes of involvement, more and more permanent changes become evident. The degree of severity of lesions in the skin does not always correspond to the severity of the arthritis. As changes in the bones and surfaces of the joints first become demonstrable in roentgenograms, they appear to be nonspecific, resembling those of rheumatoid arthritis except that in the latter condition the terminal joints of the fingers and toes are rarely affected. In cases of longstanding psoriatic arthritis where there have been numerous bouts of psoriasis and arthritis and where permanent damage has been done, destruction of the articular surfaces and dissolution of the terminal portion of the phalanx which is proximal to the affected joint occur. This effect has been labeled variously "ball and socket," "whittling" or "penciling" and is highly characteristic of psoriatic arthritis.

Technique of Treatment.—The treatment of psoriatic arthritis depends on prompt recognition of it and thorough control of the psoriasis, and in this latter respect the use of the program previously elaborated herein, in which crude coal tar and ultraviolet light are employed, is particularly valuable. The affected joints are treated as in other forms of arthritis, chiefly to minimize deformity; the application of heat in various forms, including contrast baths, and the prescription of corrective exercises and measures designed to prevent trauma, are distinctly helpful. The affected joints must be supported properly and when flare-ups occur a period of rest is essential.

From the standpoint of the patient's general health, it is wise to bring into play all the auxiliary forces that might produce benefit, such as rearrangement of the diet in cases of obesity or malnutrition and thorough elimination of foci of infection. Nonspecific treatment which provokes fever, such as hot baths, hyperthermy or the injection of foreign protein, is useful. Sunbathing is recommended strongly, and often a change of environment is beneficial, especially if change is made to a sunny, dry and equable climate.

Roentgen therapy is practicable when there is early involvement of the joints of the hands and feet. The technique has been described by Popp and Addington,[7] who elaborated the procedure commonly used for the treatment of psoriasis of the nails. Instead of applying unfiltered roentgen rays to the regions of the nails alone, these authors emphasized the exposure of the whole hand or foot to rays generated at approximately 130 kilovolts (constant potential), filtered through 4 mm. of aluminum for the hand and 6 mm. of aluminum for the foot. The dose for each treatment is about 300 r measured in air. The procedure is repeated twice at monthly intervals as needed, to a maximum of three treatments. By this technique marked symptomatic relief often is secured when the changes in the joints are not too advanced but at least three months must be allowed to elapse before the results can be evaluated. Roentgen therapy by no means is recommended as a cure for either psoriasis of the nails or for psoriatic arthritis, and since the natural course of the disease is toward recurrence and progression, the beneficial effect of the treatment on these complications may be at best only temporary. The same precautions that are needed in the treatment of cutaneous lesions by roentgen therapy must be employed in the treatment of psoriatic arthritis.

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MSMS

A letter from the Office of Censorship in Washington requests state medical journals and bulletins of county medical societies to remember that it is exceedingly inadvisable to publish uncensored letters coming from doctors in the service, particularly when they include the addresses of the physicians. Already in several instances such letters have served to reveal the identity of troops overseas. The Code of Wartime Practices for the American Press calls attention to the great danger that is inherent in this practice.

All publications are particularly requested to avoid identification of soldiers with their troop units when they are overseas, about to embark or on defense (as distinguished from training) activities in the United States. In the case of Naval personnel the identification of ships and bases is to be especially avoided. Editors of all publications will, we are sure, do their utmost to coöperate with the Office of Censorship in Washington, since the revealing of units to which physicians are attached may be of great value to the enemy in determining the character of the armed force with which it has to deal. When in doubt, editors will do well to get a direct response from the Office of Censorship regarding the release of any special item.—J.A.M.A., June 17, 1943.

Obstetrics in Michigan in Wartime

Most of Michigan's younger physicians, as well as many well-trained younger obstetricians, have entered the armed services of our country. This fact, in the face of a rapidly increasing birth rate, has thrown an additional medical service load upon older obstetricians and general practitioners of medicine. Many of the latter had ceased to serve obstetrical patients but have now returned to this work.

How have these changes affected our maternal and infant mortality rates? In 1940, the maternal death rate was 2.95 in each 1,000 deliveries and the infant mortality rate was 40.53 per 1,000. In 1941, the maternal death rate increased slightly to 2.97, but the infant mortality rate fell to 38.75. During the year 1942 there were 124,081 births in Michigan—a marked increase—but both the maternal and infant mortality rates fell: the maternal deaths to 2.06 and the infant rate to 37.07.

To summarize: In spite of fewer Doctors of Medicine and trained obstetricians and with greatly increased demand for obstetrical services, our doctors have delivered Michigan mothers and in doing so have saved more lives than in pre-war days.

Today a bureau of the federal government proposes to offer obstetrical service to the wives of certain groups of service men. The amount of service under this plan is limited and the fees for obstetrical care are set. Most of the Doctors of Medicine in Michigan have had an opportunity to examine this federal plan and to evaluate it. The questions most commonly asked are:

Is there a need for this service?
Will this plan disrupt the present physician-patient relationship?
Will the morale of our fighting men be improved by knowing that the federal government will supply medical service to their wives?
Is this an encroachment upon the practice of medicine?
Is it an opening wedge for the federal government and the state departments of health to direct all medical activities?
Should the State Society condemn those members for accepting the proposed obstetrical plan who find the fee set under the plan approaching or equal to their usual fees for obstetrical care?
Should Michigan Doctors of Medicine render the service without charge to these obstetrical patients as a patriotic duty?
Will the medical profession of Michigan be stamped as unpatriotic if it refuses to coöperate with this proposed service?
Finally, will the splendid record of maternal and fetal health which has been established during wartime under severe handicaps be maintained?

Each Doctor of Medicine in Michigan is placed in the position where he must consider these questions, thereby arriving at an answer which will be satisfactory to his Society, his conscience and his country.

W. W. Cummings

President, Michigan State Medical Society



President's Page

EDITORIAL

A CHANGED POSTWAR WORLD

■ Britain produced the Beveridge plan of postwar life which represents the thought and evidently the desires of the Administration. The Parliament did not see eye to eye, and has sidetracked it.

America has her Delano plan, the deliberated conclusions of the National Resources Planning Board, approved and sent to the Congress by the President. If you have not read this you should review it (House Document 128). It is a plan of life and government, and has very definite proposals regarding health, nutrition, education, and medical care. These are not all entirely new. "Since 1936 the Federal Government, through grants in aid, has been coöperating with the state health agencies in extending and improving maternal and child health services and with state crippled children's agencies in providing service for the physiological restoration of crippled children." (H.D. 128, Pt. 1, page 62.)

There is a pattern to which we are to be fitted, if we read correctly, and this pattern is not to our liking. Every new glimpse we get points to the same ultimate end.

Read the Delano plan (italics ours):

"The problems presented by the financial obstacles to the assurance of adequate medical care for all is one of the most important in the entire field of public health. Its solution will call for the closest coöperation between the medical profession and government. It will require, too, the courage to face economic realities *and to explore not only the potentialities of expansion of publically provided medical care but also the feasibility of methods such as social insurance which have operated successfully elsewhere.*" (page 65)

"The nation must satisfy itself that the total numbers of medical personnel after the war will be adequate for the expanded health services that are indicated. And steps must be taken to see that *medical personnel are distributed over the country* more nearly in proportion to need."

"Communities will have to explore *new methods of providing medical care* and devices for making the most economical and effective use of such facilities and personnel as are available. These gains must not be abandoned after the war. For here as elsewhere the war has merely thrown into high relief the extent of our peacetime failure to solve basic problems." (page 66)

Within the month we in Michigan and in fact all other states have had another example of government "coöperation." The Children's Bureau has put the profession of medicine behind the 8-ball. The Bureau sent announcements to the Army camps that the wives and infants of men in the armed forces of the fourth to seventh classes may have without cost maternal and infant care. This is without regard to financial need; only fill out certain blanks. This plan was announced before adequate time to study it was accorded the medical profession. Calls came pouring in for the service before many of the doctors had ever heard of the plan.

It is time the profession did some real thinking as to how we will practice, the circumstances under which it will be done, and even whether it will be a free and unchained body. No group has greater potential ability to think clearly, or see through a maze. The profession has both the education and the training, and during the ages has produced some of the world's most outstanding leaders.

The *Journal of the American Medical Association* of May 1, 1943, says editorially:

"The mark of intelligent man as contrasted with the higher apes is ability to plan for the future. On the medical profession primarily rests the obligation for much of the active work of reconstruction and rehabilitation of the postwar world. For such work the medical profession must begin to prepare now. Intelligent man does not repeat the mistakes of the past. Surely we would be unintelligent if we did not do everything in our power to meet our obligations so that the world would not again be faced by the disaster and catastrophe that followed World War I."

But why does that same editorial end:

"Certainly the time is not too soon to suggest that the government of the United States establish as soon as possible a mechanism for giving to these questions the analysis and consideration that they deserve and for suggesting the steps that may be followed under a democratic government for their solution."?

Do we find the industrialists asking the government to plan their future for them? Decidedly not! Industry is busily engaged in plan-

ning its own future. It will make its own decisions. Does not our experience and the observation of what is going on about us now, indicate that the last thing we want is for some bureaucrat to do our thinking and our planning? Think it over.

THE BIDDLE ORATION

■ The Biddle Oration was established in 1935 to honor one of our most outstanding and lovable members, Andrew P. Biddle, M.D. He was secretary of the Michigan State Medical Society in 1902 when the Society was reorganized and THE JOURNAL established. He became the first editor and served four years. He was president in 1916-18, the only man ever elected to succeed himself as president. Dr. Biddle was trained at Annapolis, but retired from Naval life to study medicine, and has practiced in Detroit fifty-seven years.

Dr. Biddle suggested that the name of the "Biddle Oration" be changed in favor of some other doctor whom the Society wishes to honor. The committee has considered this suggestion for over a year and has decided to make the suggested change. Next year it will be "The Theodore A. McGraw Lecture."

Another of our members who has been very active in public affairs and generous in his postgraduate medical efforts has made provision for an honorarium for the essayists on this program for ten years. He wishes his name kept anonymous, but the Society hereby gives him our testimony of appreciation. It is a grand gesture and will bring untold benefits.

Communication

Editor, Journal MSMS
Michigan State Medical Society
Lansing, Michigan

Dear Doctor:

We want to call your attention to an error in your article, entitled, "Women Doctors Commissioned," on page 378 of your May issue. On good authority we understand that the only woman physician from Michigan at the time of the first World War who served overseas was your good friend, Dr. Marie B. Coolidge of Detroit. Bertha Davis apparently came in from some other state since then.

Dr. Coolidge enlisted directly in the Army but because women at that time were not militarized, at the suggestion of the Federal Government, she served under the American Red Cross. She served in seven offensives and the day the armistice was signed the government sent her back to this country, and she lectured in the seventh and eleventh Victory Loan Districts.

Will you kindly see that justice is done?

Best regards.

Very truly yours,
J. A. BECHTEL
Executive Secretary
Wayne County Medical Society

NOTE: The editor did not know of Dr. Coolidge's service, and is glad to acknowledge it. Dr. Davis did not come in later from another state. She graduated from University of Michigan, 1904, and was practicing in Lansing when called to service. It is Clara M., though, instead of Sister Bertha (editor's mistake), and she is now at Winnetka, Illinois. This information about Dr. Davis comes partly from the Victory number of THE JOURNAL, May, 1919, where she had a full-page picture. We are unable to find Dr. Coolidge in that number, hence our lapse for which we apologize.

THE OLD DOCTOR

By Edgar A. Guest

The old-time family doctor now is back with us once more.
As majors and as captains all the young have gone to war
And the doctor, long past fifty, is on duty night and day
Taking care of all us patients in his good old-fashioned way.

There is something in his manner reassuring to the sick.
Is it age or is it wisdom? Is it just a doctor trick?
But his speech has comfort in it and it's good to hear him tell
If we'll carry out his orders we will pretty soon be well.

The little grip he carries shows the signs of wear and tear.
Like the doctor it has labored long, through weather foul and fair,
And the same things still are in it. All the remedies of old,
The pink or crimson tablets good for breaking up a cold.

The young and modern doctors now are working land and sea.
For our forces who are fighting in the cause of liberty;
And until the war is ended, here at home I'm very sure
The old-time family doctor every ill that comes will cure.

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DELEGATES TO MSMS HOUSE OF DELEGATES

(Names of Alternates Appear in Italics)

P. L. Ledwidge, M.D.
Detroit, *Speaker*
G. Howard Southwick, M.D.
Grand Rapids, *Vice Speaker*
L. Fernald Foster, M.D.
Bay City, *Secretary*
Col. Henry R. Carstens, M.C.
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H. H. Johnson, M.D., Allegan

Alpena-Alcona-Presque Isle
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F. J. O'Donnell, M.D., Alpena

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Cass
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C. A. Paukstis, M.D., Ludington

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(Elected for two years in 1941; now in service.)
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Ontonagon
W. F. Strong, M.D., Ontonagon
H. B. Hogue, M.D., Ewen

Ottawa
A. E. Stickley, M.D., Coopersville
G. J. Kemme, M.D., Allendale

Saginaw
Clarence E. Toshach, M.D., Saginaw
Lloyd C. Harvie, M.D., Saginaw
(None elected)

Sanilac
R. K. Hart, M.D., Croswell
N. J. Ellis, M.D., Croswell

Shiawassee
I. W. Greene, M.D., Owosso
H. A. Hume, M.D., Owosso

St. Clair
George Waters, M.D., Port Huron
W. A. Schaefer, M.D., Port Huron

St. Joseph
R. A. Springer, M.D., Centerville

Tuscola
Lt. T. E. Hoffman (U. S. Navy)
R. R. Cook, M.D., Akron

Van Buren
Wm. R. Young, M.D., Lawton
William Bope, M.D., Decatur

Washtenaw
Dean W. Myers, M.D., Ann Arbor
William Brace, M.D., Ann Arbor
Hugh Beebe, M.D., Ann Arbor
John Wessinger, M.D., Ann Arbor
Leo A. Knoll, M.D., Ann Arbor
John S. DeTar, M.D., Milan
H. B. Britton, M.D., Ypsilanti
Mathew Soller, M.D., Ypsilanti

Wayne
W. D. Barrett, M.D., Detroit
R. L. Novy, M.D., Detroit
J. M. Robb, M.D., Detroit
A. E. Catherwood, M.D., Detroit
C. D. Brooks, M.D., Detroit
R. C. Jamieson, M.D., Detroit
G. L. McClellan, M.D., Detroit
Wm. J. Stapleton, M.D., Detroit
W. B. Cooksey, M.D., Detroit
C. E. Simpson, M.D., Detroit
T. K. Gruber, M.D., Detroit
C. E. Dutchess, M.D., Detroit
Harry F. Dibble, M.D., Detroit
Henry A. Luce, M.D., Detroit
Charles S. Kennedy, M.D., Detroit
F. G. Buesser, M.D., Detroit
L. W. Hull, M.D., Detroit
L. J. Hirschman, M.D., Detroit
H. W. Plaggemeyer, M.D., Detroit
C. F. Brunk, M.D., Detroit
R. V. Walker, M.D., Detroit
D. C. Beaver, M.D., Detroit
J. H. Andries, M.D., Detroit
E. R. Witwer, M.D., Detroit
Allan McDonald, M.D., Detroit
Earl G. Krieg, M.D., Detroit
W. B. Harm, M.D., Detroit
L. J. Morand, M.D., Detroit
S. W. Insley, M.D., Detroit
A. F. Jennings, M.D., Detroit
M. A. Darling, M.D., Detroit
Volney N. Butler, M.D., Detroit
Ira G. Downer, M.D., Detroit
Wm. S. Reveno, M.D., Detroit
Bruce H. Douglas, M.D., Detroit
L. J. Bailey, M.D., Detroit
Wm. N. Braley, M.D., Detroit

C. K. Halsey, M.D., Detroit
Wm. S. Gonne, M.D., Detroit
Frank A. Weiser, M.D., Detroit
J. A. Kasper, M.D., Detroit
John H. Law, M.D., Detroit
Bruce C. Lockwood, M.D., Detroit
James H. Dempster, M.D., Detroit
L. T. Henderson, M.D., Detroit
Wm. P. Chester, M.D., Detroit
Arch Walls, M.D., Detroit
L. O. Geib, M.D., Detroit
Wm. H. Honor, M.D., Detroit
L. J. Gariepy, M.D., Detroit
B. L. Connelly, M.D., Detroit
F. W. Hartman, M.D., Detroit
Harry L. Clark, M.D., Detroit
H. P. Cushman, M.D., Detroit
George B. Hoops, M.D., Detroit
Harry A. Pearse, M.D., Detroit
R. C. Connelly, M.D., Detroit
E. M. Vardon, M.D., Detroit
Charles J. Barone, M.D., Detroit
Harold E. Clark, M.D., Detroit
C. S. Ratigan, M.D., Detroit
James E. Cole, M.D., Detroit
A. V. Forrester, M.D., Detroit
L. J. Foster, M.D., Detroit
M. H. Hoffmann, M.D., Detroit
A. H. Whittaker, M.D., Detroit
Edward D. King, M.D., Detroit
Wm. P. Woodworth, M.D., Detroit
James J. Lightbody, M.D., Detroit
David I. Sugar, M.D., Detroit
W. A. Chipman, M.D., Detroit
S. A. Flaherty, M.D., Detroit
Wm. Hamilton, M.D., Detroit
G. M. Byington, M.D., Detroit
C. D. Moll, M.D., Detroit
H. L. Morris, M.D., Detroit
B. I. Johnstone, M.D., Detroit
B. H. Priborsky, M.D., Detroit
L. W. Shaffer, M.D., Detroit
R. A. C. Wollenberg, M.D., Detroit

Wexford-Missaukee

W. J. Smith, M.D., Cadillac
J. F. Gruber, M.D., Cadillac

CONSTITUTION-BY-LAWS' CHANGES CONCERNING DELEGATES

The 1942 MSMS House of Delegates amended Article 4, Section 3 of the Constitution to include the immediate past-president of the State Society as a member at large of the House of Delegates, with the right to vote and hold office. In addition, all past-presidents now have a right to the floor in the House of Delegates accorded to a regular Delegate, but not the right to vote.

In the By-laws, Section 2 was changed so that a member must be either an active member—or a Member Emeritus—of the State Society for at least two years preceding election as Delegate.

Section 3 was changed as follows: "Any Delegate-elect not present to be seated at the hour of call of the first session may be replaced by an accredited Alternate next on the list as certified by the Secretary of the County Medical Society involved."

Finally, Section 7(n) was amended so that all resolutions introduced into the House shall be in triplicate (not duplicate).

HOUSE OF DELEGATES, 1943

REFERENCE COMMITTEES

On Credentials

J. J. O'Meara, M.D., **Chairman**

Hollis L. Sigler, M.D. — Lloyd C. Harvie, M.D.
Earl G. Krieg, M.D. — L. J. Bailey, M.D.

On Officers' Reports

Parlor C, Ballroom Floor

R. A. Springer, M.D., **Chairman**

L. J. Hirschman, M.D. — R. D. Scott, M.D.
R. K. Hart, M.D. — L. J. Morand, M.D.

On Reports of the Council

Judge Woodward Room (North End)

E. R. Witwer, M.D., **Chairman**

Carl F. Snapp, M.D. — William J. Stapleton, Jr., M.D.
L. W. Hull, M.D. — E. A. Oakes, M.D.

On Reports of Standing Committees

Parlor D, Ballroom Floor

J. J. Walch, M.D., **Chairman**

W. B. Cooksey, M.D. — Roger V. Walker, M.D.
C. W. Oakes, M.D. — Donald C. Beaver, M.D.
L. W. Day, M.D. — W. H. Alexander

On Reports of Special Committees

Parlor E, Ballroom Floor

C. E. Simpson, M.D., **Chairman**

Ernest N. D'Alcorn, M.D. — Harold R. Roehm, M.D.
W. B. McWilliams, M.D. — Robert C. Jamieson, M.D.
Volney Butler, M.D. — Esli T. Morden, M.D.

On Amendments to Constitution and By-Laws

Judge Woodward Room (South End)

C. L. Hess, M.D., **Chairman**

John A. Wessinger, M.D. — A. F. Jennings, M.D.
Charles E. Dutches, M.D. — A. V. Wenger, M.D.

On Resolutions

Parlor F, Ballroom Floor

S. W. Insley, M.D., **Chairman**

Robert S. Breakey, M.D. — G. L. McClellan, M.D.
W. B. Harm, M.D. — Robert H. Baker, M.D.
D. R. Brasie, M.D. — J. M. Robb, M.D.
S. L. Loupee, M.D. — William S. Reveno, M.D.

Reference Committee reports are to be submitted to The House of Delegates in TRIPLICATE

TWO-DAY SESSION OF HOUSE OF DELEGATES

The 1943 House of Delegates of the Michigan State Medical Society will hold a two-day session, beginning Monday, September 20, 8:00 p.m. The business of the House will be transacted in the Ballroom of the Statler Hotel, Detroit.

The House will meet Tuesday, September 21 at 10:00 A.M. and at 8:00 P.M. The intervals between meetings of the House of Delegates have been spaced to permit the reference committees ample time to transact all business referred to them.

Such additional meetings as may be necessary will be held Wednesday, September 22, beginning at 10:00 A.M.

Committee Reports

ANNUAL REPORT OF MEDICAL-LEGAL COMMITTEE, 1942-43

The activities of the Medico-Legal Committee have been limited to that of an advisory board and no meeting of the Committee as a whole has been held during the past year.

Some of the cases in which litigation was pending at the time malpractice defense was discontinued by action of the House of Delegates have been settled during the past year.

The Medico-Legal Committee had no problems to submit to the Public Relations Committee for their program of *Work and Problems of the Medical Profession During Wartime* and that committee was so advised.

Correspondence during the year has consisted of a few inquiries in regard to medico-legal subjects which were sent directly to the Chairman of the Committee or were forwarded to him from the Executive Office of the Society. The Chairman of the Committee participated in a radio broadcast in which questions and answers were related to medico-legal subjects as they affect the layman; this program was broadcast over Station WJR in April, 1943.

Respectfully submitted,
S. W. Donaldson, M.D., *Chairman*
Ralph Cook, M.D.
Paul A. Klebba, M.D.
E. S. Parmenter, M.D.,
Wm. J. Stapleton, M.D.
E. A. Wittwer, M.D.

ANNUAL REPORT OF SYPHILIS CONTROL COMMITTEE, 1942-43

Four meetings of the Syphilis Control Committee were held during the year 1942-43. All meetings have been held on Sundays in Lansing.

The preparation of a prophylactic kit, considered to be an improvement over the usual commercial product, was one of our main activities for the year. In its preparation we received the advice and coöperation of the Retail Druggists Association through Mr. L. A. Wikel. This kit will bear the endorsement of the Michigan State Medical Society through this committee and will soon be on sale through retail druggists.

It was recommended to the Legislative Committee that the premarital law be amended to permit special certification at the discretion of the State Health Commissioner in cases where the woman concerned was demonstrated to be pregnant and venereal disease is present in either party. It was also recommended that a time limit of ninety days be placed on marriage licenses. Neither of these recommendations received favorable action by the State Legislature. Our Committee has recommended their reconsideration before the next session of this body.

The present designation of "Syphilis Control" is not descriptive of the scope of our Committee. It is recommended that the House of Delegates approve of "Venereal Disease Control" as a more appropriate name for this Committee.

Other activities included the approval along with the Industrial Health Committee of a program of venereal disease control in industry and coöperation with the Director of Postgraduate Medical Education for including venereal disease in the postgraduate program.

A joint meeting with the Michigan Bar Association and Mr. John Goldsmith, Chairman of the Committee on Courts and Wartime Social Protection of the American Bar Association, was held in May. A committee was appointed with representatives from the Michigan Bar Association, Department of Health and our Committee. Its purpose is to codify Michigan laws in relation to venereal disease, make recommendations for strengthening same and secure more active coöperation with our law enforcement agencies and the Michigan Liquor Control Commission.

Respectfully submitted,
Loren W. Shaffer, M.D., *Chairman*
R. S. Breakey, M.D.
Kent Alcorn, M.D.
Ruth Herrick, M.D.
H. L. Keim, M.D.
F. J. O'Donnell, M.D.
R. S. Ryan, M.D.
Wm. R. Vis, M.D.

ANNUAL REPORT OF COMMITTEE ON INDUSTRIAL HEALTH, 1942-43

The Committee on Industrial Health held two meetings during the year, the first on November 7 and the second on March 18.

A training program for physicians expecting to serve as replacements in plant medical departments was developed in coöperation with the Bureau of Industrial Hygiene, Michigan Department of Health, Journal MSMS, Nov., 1942, page 1002.) This "in service" training program was merely devised as an emergency measure as it is realized that only a few basic principles could be covered in the three weeks' period that was established for this purpose. This three-week period was divided into one week of didactic work, one week of field work and assignment for one week to a large industrial medical department.

Although many inquiries have been received concerning this training program, only one physician availed himself of the opportunity. Those available for training are undoubtedly too busy at the present time to consider making a change.

Some work has been done on the development of brochure for small plants, but more pressing work has prevented its completion.

A venereal disease control program in industry has been approved by the Committee on Industrial Health and Syphilis Control Committee and has been adopted by the Executive Committee of the Council.

The Committee published an article in The Journal MSMS concerning the recent revisions of the Michigan Workmen's Compensation Act, particularly those changes of interest to the medical profession.

The Committee, in Coöperation with the Postgraduate Medical Education Department of the University of Michigan, sponsored a one-day meeting on industrial medicine and surgery. This meeting, held in Detroit on April 8, was a complete success, having an attendance of 418, including registrants from seventeen states, Ontario and Saskatchewan. The luncheon and dinner were sellouts and a number of persons had to be turned away from each. Several have suggested that this meeting be made an annual affair and it is hoped that this can be done.

Respectfully submitted,

Kenneth E. Markuson, M.D., *Chairman*
H. H. Gay, M.D., *Vice Chairman*
R. U. Adams, M.D.
C. W. Brainerd, M.D.
A. L. Brooks, M.D.
Henry Cook, M.D.
W. A. Dawson, M.D.
W. B. Harm, M.D.
C. P. McCord, M.D.
C. D. Selby, M.D.

ANNUAL REPORT OF THE CHILD WELFARE COMMITTEE, 1942-43

The Committee had one official meeting, May 2, 1943, at which time, with the Maternal Health Committee of the MSMS, the members discussed the problem of pediatric, obstetrical, and hospital aid to the wives and infants of enlisted men in grades 4, 5, 6, and 7. This program was presented by Lillian R. Smith, M.D., director of the Bureau of Maternal Health and Child Welfare of the Michigan State Department of Health and was based upon legislation passed by the United States Congress and administered by the Children's Bureau of the Department of Labor. This legislation was a rider to a deficiency appropriation measure and was not basic legislation; the terms and conditions were not provided by law but were left as a matter of administrative determination to the discretion of the Secretary of Labor and the Chief of the Children's Bureau.

Without going into detail concerning the extensive discussion which took place, the combined committee thought that the program as presented by Dr. Smith offered too many objectionable features for the committees to approve it. Therefore, it was recommended that a transcript of the proceedings of the meeting be prepared and sent to every county medical society in the State for their consideration with the request that they pass upon it immediately and send the result of their deliberations to the Secretary. The Committee also went on record as deploring the lack of representation of the medical profession in Washington which would permit any such conditions to arise.

2. Dr. F. B. Miner's subcommittee, in coöperation with officials of the Department of Health, has prepared a new Brochure on Immunization and Diagnostic Procedures for Physicians. This is a very extensive review of recommended immunization and diagnostic procedures.

3. A. L. Richardson, M.D., has made repeated contacts with the American Legion Child Welfare Committee and is carrying our counsel to them.

The Committee derives no small degree of satisfaction in seeing some of its projects of two years ago come to fruition, namely, (1) county health unit in Wayne County with the attendant improvement in health and sanitation around the Bomber Plant; (2) a day nursery program which is becoming widespread throughout the State, particularly in the industrial areas; (3) a tremendous increase in the public awareness of the juvenile delinquency problem.

Respectfully submitted,
Frank Van Schoick, M.D., *Chairman*
R. M. Kempton, M.D., *Vice Chairman*
Moses Cooperstock, M.D.
Campbell Harvey, M.D.
Edgar Martmer, M.D.
Chas. F. McKhann, M.D.
A. L. Richardson, M.D.
L. J. Schermerhorn, M.D.
L. Paul Sonda, M.D.

ANNUAL REPORT OF MENTAL HYGIENE COMMITTEE, 1942-43

During the year, two official meetings were held and in addition there were a number of unofficial discussions concerning important psychiatric problems by various members of the Committee. The issues raised and methods of solution recommended were as follows:

1. The problem of the individual rejected by the Army Induction Station and returned home. To many this is a severe psychic trauma, which may be sufficient to cause a mental disorder severe enough to require treatment. Prevention of a part of the trauma would occur in the individual were he never sent to the Induction Station in the first place. In this connection a statement was formulated and published in The Journal of the Michigan State Medical Society. A Radio Discussion of these problems on January 6, 1943, over WJR and a Round Table Discussion on May 9, 1943, over WJR occurred, at which time public attention was called to these problems.

2. The care of men discharged from the Army for psychiatric difficulties was discussed.

3. A resolution was presented to the Executive Committee of the Council suggesting that the Mental Hygiene Committee submit the names of physicians which might be recommended to the Governor for appointment to the State Hospital Commission and to the Bureau of Paroles and Pardons. This was accepted and names were submitted to the Executive Committee.

4. The Mental Hygiene Committee recommended the use of more psychiatric material on the program of the annual meeting of the Michigan State Medical Society.

5. The question of a resolution concerning premarital instruction to be given by physicians was discussed at considerable length, the final recommendations being that as much material on the subject as could be obtained from various parts of the country should be secured and that from this material should be worked out a program which might be utilized in Michigan. The importance of editorial comment in the State Medical Journal concerning this matter, as well as the publication of an article in the State Medical Journal, and perhaps the presentation of a paper on the subject at the annual meeting of the Society in September, was considered.

6. The importance of close coöperation between the specialty of Psychiatry and other branches of medicine was discussed at considerable length and in view of the work being done by R. G. Brain, M.D., of Flint in the development of a liaison between psychiatry and surgery, it was planned to have Dr. Brain write a short article which could be submitted to the Editor of The Journal of the State Medical Society for possible publication at a later date.

7. During the past, problems have arisen as result of inadequately completed physicians' certificates which are used in commitment procedures. In view of these difficulties, R. A. Morter, M.D., a member of the Mental Hygiene Committee, was appointed to write an article which could be published in the coming issue of The Journal of the State Medical Society having to do with the factor of importance in making out such certificates.

Respectfully submitted,
R. W. Waggoner, M.D., *Chairman*
R. G. Brain, M.D.
Robert Dixon, M.D.
H. A. Luce, M.D.
R. A. Morter, M.D.
H. A. Reye, M.D.
O. R. Yoder, M.D.

ANNUAL REPORT OF THE RADIO COMMITTEE, 1942-43

The Radio Program of the Michigan State Medical Society for 1942-1943 was made possible by the cooperation of the University of Michigan Broadcasting Service under Professor Waldo Abbott and the University Extension Division under Dr. Charles Fisher. That this program met with some measure of success is entirely the result of their enthusiasm and interest. Professor Abbott supervised the broadcasting and Dr. Fisher made possible the distribution of printed matter as requested by the listening audience. Two outlets were used, WJR with an almost nationwide coverage and WKAR of Lansing for the Michigan Network. Members of the State Society responded promptly when asked for material and a great deal of effort was used by each individual in preparing himself for the thirteen minutes on the air. Particular credit should be given

H. H. Riecker, M.D., for the twelve related talks which he prepared and gave over WKAR. The response from the listening audience as measured in terms of requests for printed programs, leads us to feel that much good was accomplished. Appended to this report is the complete program for each station.

From this year's experience, certain conclusions are valid: First, the University of Michigan will always have an excellent radio outlet; second, the University of Michigan is anxious to present a dignified and sound medical program over the air and welcomes the sponsorship of the Michigan State Medical Society; third, without the collaboration of the University, a similar program would be very expensive; fourth, continuity of personnel and material is gained by close association of the broadcasting service with the State Society.

With the above conclusions in mind, it would seem wise to abolish the radio committee of the State Society and transfer its activities to the Department of Postgraduate Medicine of the Medical School of the University of Michigan, with the Committee on Postgraduate Medical Education of the State Socicty as advisory. In addition the Joint Committee on Health Education might also act in a similar capacity. By this plan the greatest measure of economy would be achieved, a dignified program presented, and a thorough editing could be assured.

* * *

MEDICAL TALKS—WJR, WEDNESDAYS, 10:30 P.M.

Nov. 11—Dr. Carl A. Moyer, Assistant Professor of Surgery. Topic: Physiological Problems Pertaining to the War.
Nov. 18—Dr. Maurice Seevers, Professor of Pharmacology and Chairman of that Department. Topic: The Sulfa Drugs.
Nov.. 25—Dr. George Ramsey, Resident Lecturer in Epidemiology. Topic: Epidemics in Time of War.
Dec. 2—Miss Rhoda Reddig, Professor of Nursing and Director of School of Nursing. Topic: Nursing During the War.
Dec. 9—Dr. Howard H. Cummings, Director of Postgraduate Medicine. Topic: The Effect of the War Upon Medical Service in Michigan.
Dec. 16—Dr. Ralph Pino, Editor, *Detroit Medical News*. Topic: What Michigan Is Doing Through Health Insurance for the Community.
Jan. 6—Dr. Raymond W. Waggoner, Professor of Psychiatry and Chairman of that Department. Topic: Psychiatric Problems of the War.
Jan. 13—Dr. Frank N. Wilson, Professor of Internal Medicine. Topic: Medical Research in South America.
Jan. 20—Dr. Harold Falls, Assistant Professor, Ophthalmology. Topic: The Care of the Eyes of Children with Special Reference to Amblyopia.
Feb. 10—Dr. Henry Ransom, Associate Professor of Surgery. Topic: Until the Doctor Comes.
Feb. 17—Dr. Charles F. McKhann, Professor of Pediatrics and Communicable Diseases, and Chairman of that Department. Topic: War Babies.
Feb. 24—Dr. John Barnwell, Associate Professor of Internal Medicine. Topic: Tuberculosis and the War.
Mar. 3—Captain Donald Leonard, Michigan State Police. Topic: Emergency Medical Service in Michigan.
Mar. 10—Dr. Loren Shaffer, Director, Social Hygiene Division, City of Detroit. Topic: Venereal Disease Control in Michigan Defense Areas.
Mar. 17—Dr. Frank Van Schoick, Chairman, Child Welfare Committee, Michigan State Medical Society, Jackson, Michigan. Topic: Child Welfare and the War.
Mar. 24—Dr. Herman Riecker, Associate Professor of Internal Medicine in the Department of Postgraduate Medicine. Topic: The Health of the Industrial Worker.
Mar. 31—Dr. Maurice H. Seevers, Professor of Pharmacology and Chairman of the Department. Topic: Drugged Sleep.
April 7—Maj. Dan Bohmer, U. S. Medical Corps, University R.O.T.C. Topic: The Army Doctor's Job.
April 14—Dr. S. W. Donaldson. Topic: YOU called the Doctor.
April 21—Dr. Carl Badgley, Professor of Surgery. Topic: When You Break a Bone.
April 28—Miss Adelia M. Beeuwkes, Instructor in Public Health Nutrition. Topic: Rationed Eating and Health.
May 5—Dr. A. C. Curtis, Department of Dermatology, University Medical School. Topic: My Skin Itches.

MEDICAL TALKS—WKAR, 3:45 P.M.

Material Presented by Herman H. Riecker, M.D., Professor of Postgraduate Medicine, University of Michigan Medical School, Ann Arbor.

Feb. 17—Arthritis.
Feb. 24—The Care of the Heart in Middle Life.
Mar. 3—Indigestion. Causes and Management.
Mar. 10—Fatigue.
Mar. 17—Foods for Stamina.
Mar. 24—The Allergic Diseases.
Mar. 31—How Infections Are Spread.
April 7—Tuberculosis.
April 14—Immunization vs. Disease.
April 21—The Control of the Body Weight
April 28—The Chronic Cough.
May 5—The Care of the Elderly.

Respectfully submitted,
HUGH M. BEEBE, M.D., *Chairman*
R. A. BURKE, M.D.
WM. HAMILTON, M.D.
R. J. MASON, M.D.
J. H. MCMILLIN, M.D.
G. M. WALDIE, M.D.
FRANK WEISER, M.D.

ANNUAL REPORT OF IODIZED SALT COMMITTEE, 1942-43

During the past year the members of this Committee have continued their studies of the various projects before the Committee which were previously reported to the MSMS House of Delegates. They represent a long-time program, requiring considerable consideration and contact work with other organizations and associations interested in the status of iodized salt.

The Committee wishes to recommend a continuation of the Iodized Salt Committee until its work shall have been completed.

Respectfully submitted,
F. B. MINER, M.D., *Chairman*
T. B. COOLEY, M.D.
L. W. GERSTNER, M.D.
D. J. LEVY, M.D.
DORMAN E. LICHTY, M.D.
R. D. MCCLURE, M.D.
R. J. MOEHLIG, M.D.

ANNUAL REPORT OF ETHICS COMMITTEE, 1942-43

The Ethics Committee has had rather a quiet year. There is very little to report in the way of alleged transgressions of the Code of Medical Ethics.

We can attribute this to the war in two different ways. In the first place the men are so busy with the ethical practice of medicine that they have no leisure time to think up any tricks of sabotage against the ethical code in those few scattered cases where there might be an inclination to do this.

In the second place what promised to be one of the toughest cases in many years to handle has been postponed for the duration of the war because the alleged transgressor received a commission in the Armed Forces.

We are therefore very happy to report that the few cases we had were apparently handled by correspondence with excellent results because they seemed to be little matters of local misunderstanding.

Respectfully submitted,
H. W. PORTER, M.D., *Chairman*
E. B. ANDERSEN, M.D.
GUY D. CULVER, M.D.
J. C. GROSJEAN, M.D.
L. C. HARVIE, M.D.
GEO. B. HOOPS, M.D.
ESLI T. MORDEN, M.D.

ANNUAL REPORT OF MEDICAL PREPAREDNESS COMMITTEE, 1942-43

The Procurement and Assignment Service for Physicians for the Armed Forces and Civilian Needs continued under the same Chairman and Committee as last year. Eight meetings were held. Many problems were settled for both the Armed Forces and the Local Communities.

In October, 1942, the services of the Recruiting Board were no longer needed; Michigan had nearly filled her

quota. The officers of the Recruiting Board were released by the Surgeon General and were assigned to their former positions in the Armed Forces. The patriotic response of the doctors of medicine in Michigan in 1942 helped to meet the national quota of 42,500 physicians. As a result, Procurement and Assignment demonstrated that they could fulfill their promise to the Surgeons General of the Army and Navy.

Survey of the Medical Needs of Michigan

Reports were received from various communities that they lacked adequate medical care due to increased population in industrial centers. Four surveys were made to ascertain the needs of the communities, and each survey was made by a separate organization to evaluate the needs of the communities from four different angles. One survey was made by the Army Intelligence, one by the Michigan Department of Health through each county or district health officer, and one by the Secretary of each County Medical Society. The fourth survey was made by the Procurement and Assignment Committee of each County Medical Society.

The report of the Army Intelligence was never disclosed. The district health officers reported that there were no critical medical shortages but more doctors would be needed if there should be an epidemic. The County Secretaries gave their report in detail, indicating that forty doctors were needed for replacements at that time. Today, there are five more communities that are in need of medical care, but none of these are critical.

Surveys were made by the United States Public Health Service; by Colonel Meriwether, district officer from Chicago; and by the Procurement and Assignment Chairman of Michigan. The Soo was the first community to be surveyed jointly. At a meeting of the public and the medical profession, it was determined by a cross-examination of the citizens present that there were no cases lacking adequate medical care. However, due to the increase in population and to activities at Fort Brady, two doctors are to be allocated to the Soo.

We asked for the release of two commissioned doctors from the Armed Forces so they could return to their former relocation where they were urgently needed, but we were unsuccessful. Only in extreme cases will the armed forces release any officers.

In other areas, the medical profession said that they could care for the communities without assistance.

Relocated Doctors

To date, we have relocated 21 doctors in communities upstate; the majority in the critical area in the western part of Wayne County, including Willow-Run Townsite. Eleven residents who will complete their terms on June 30, 1943, are available for relocation.

We have sent doctors to some communities lacking medical care, but due to lack of coöperation with the local medical profession and the citizens in providing office and living quarters, the doctors returned to their former locations.

Several doctors, formerly licensed to practice in this state, returned to Michigan from other states.

Hospitals

The Procurement and Assignment Committee assisted the doctors of the western part of Wayne County in making application to the Board of Supervisors of Wayne County for the use of one of the buildings at the William J. Seymour Hospital at Eloise, Michigan. The people were very much in need of this hospital. We can now state that the hospital administration has turned this building over to the citizens of the western part of Wayne County for hospital service.

Dr. Warner of the U. S. Public Health Service made a detailed report of the Housing Project, dormitories, and expendable trailer camps in industrial areas of Detroit and other cities, giving the population of each, and the medical care needed. In Townsite, and other large housing projects, facilities will be available for living quarters and offices for physicians.

Medical School Needs Due to the Change in the School Curriculum from Four to Three Years

A meeting was held with the University of Michigan and Wayne University to ascertain their needs. Both agreed to reduce their teaching staffs to the minimum number to provide good teaching facilities. We wish to thank Dean Furstenberg and Dean Norris for their excellent coöperation.

Quotas

At the November meeting of the Sixth Service Command, the quotas for the Armed Forces were discussed. Michigan had met her 1942 quota, and was 50 per cent over. This was accredited to 1943, leaving us approximately 28 for 1943. We are far above our quota now, and consequently, no more doctors are being taken from Michigan, except residents and interns. They are not accredited to any quota.

A State Committee was formed to consult the Procurement and Assignment of Dentists, Veterinarians and Physicians composed of representatives of the Michigan State Medical Society, Civilian Defense, Chamber of Commerce and all those interested in adequate medical care.

Clarence D. Moll, M.D., was made State Vice Chairman for Procurement and Assignment Service of Physicians in Wayne County.

The State Committee wishes to thank the Michigan State Medical Society Council and its Executive Committee; the Procurement and Assignment Committees of each County Society; the State Selective Service; and others who have aided in meeting the demands of the Armed Forces and the needs of the civilian population, for their coöperation.

Respectfully submitted,

P. R. Urmston, M.D., *Chairman*
F. G. Buesser, M.D.
Milton Darling, M.D.
L. Fernald Foster, M.D.
Harold A. Furlong, Lt. Col., M.C.
C. D. Moll, M.D.
H. H. Riecker, M.D.
C. I. Owen, Major, M.C.
J. G. Slevin, Lt. Col., M.C.

ANNUAL REPORT OF PROFESSIONAL LIAISON COMMITTEE, 1942-43

The Michigan State Medical Society presented no communication to this Committee. The Michigan State Dental Society presented no communication to this Committee. The Michigan State Pharmaceutical Association advised the Committee that certain drugs may be sold or dispensed without the authority of a doctor of medicine, and that the unrestricted sale of these drugs is dangerous to the public health. They cited the steps taken to control these drugs in the form of the so-called barbiturate law (Act No. 204 of the Public Acts of 1943) and the Federal Dangerous Drug Act. The effectiveness of the latter Act has not been tested in States not having a similar state law, and the Barbiturate Act is limited in scope. In their opinion more drugs should be included in this state Act, and the advisability of making Act 204 conform with the Federal Dangerous Drugs Act should be studied.

Executive Secretary Wm. J. Burns explained the measures taken by the Michigan State Medical Society to secure the passage of Act No. 204, and that it was passed to correct certain criminal abuses as much as to control the sale of the drugs included in it. Since the bill had been approved by all persons interested in it by the time this Committee had met, it was deemed

unwise to attempt to amend it at this session of the legislature.

It was, therefore, recommended that this Committee study Act No. 204 with the intent of having it conform to the Federal Dangerous Drug Act and that this Committee make a study of, and report upon all state and federal legislation governing the prescribing, dispensing and administration of drugs, chemicals and anesthetics.

Respectfully submitted,

Alpheus F. Jennings, M.D., *Chairman*
W. H. Boughner, M.D.
E. L. Chapman, M.D.

ANNUAL REPORT OF CANCER CONTROL COMMITTEE, 1942-43

1. The Committee has devoted its entire attention to the completion of the Cancer Manual. The material has been submitted, edited and is in the hands of the printer —the books will be distributed sometime during the latter part of the summer.

2. The Committee wishes to thank all the various members of the State Society who contributed chapters dealing with Cancer in their particular specialties.

3. The Chairman wishes personally to acknowledge his sincere appreciation for the time, thought and help of all the members of the Cancer Committee, particularly C. V. Weller, M.D., who coedited the book with Frank L. Rector, M.D., our Field Representative, and who so generously gave us space for the work in his office at the University. Also, the advice and encouragement of F. A. Coller, M.D., who always had an excellent suggestion as to solving some of the difficulties in this work. C. K. Hasley, M.D., in carrying out the necessary work in the Detroit area, contributed greatly to the completion of the work.

4. Frank L. Rector, M.D., our Field Consultant, has very ably covered the ground this year having been granted every possible help and coöperation by N. Allan Hoyer, M.D., Commissioner of the Michigan Department of Health.

5. We are planning to extend our work in the fall to create some material for nurses and institutions for training of teachers that will be more accurate and enlightening than the present material available to them.

William A. Hyland, M.D., *Chairman*
J. H. Cobane, M.D.
F. A. Coller, M.D.
C. E. DeMay, M.D.
C. K. Hasley, M.D.
A. B. McGraw, M.D.
C. V. Weller, M.D.

ANNUAL REPORT OF COMMITTEE ON PRELICENSURE MEDICAL EDUCATION, 1942-43

This Committee has not been called together during this past year. It seems evident that until the war is over there can be nothing accomplished along the lines that this committee had in mind a couple of years ago.

Respectfully submitted,

Burton R. Corbus, M.D., *Chairman*
A. C. Furstenberg, M.D.
C. R. Keyport, M.D.
J. Earl McIntyre, M.D.
Edgar H. Norris, M.D.

ANNUAL REPORT OF MSMS REPRESENTATIVES TO JOINT COMMITTEE ON HEALTH EDUCATION, 1942-43

The Joint Committee on Health Education operating on limited funds has, in the past year, limited its activities to the Speakers' Bureau. In that, we have had as always the enthusiastic coöperation of Dr. Charles Fisher and the Extension Division of the University of Michigan.

There has been some discussion in the past year as to the advisability of discontinuing our activities and combining with the Adult Educational Group. However, the feeling of our Executive Committee and the Council of the State Society is that it would be advisable to continue on a lessened activity basis until such time as the Committee could be certain that its purpose could be fulfilled by other agencies.

A satisfactory number of lay audiences has been addressed on health matters during the year. Our educational films have been advantageously used.

Even though its funds are limited, the Joint Committee felt justified in assigning two hundred and fifty dollars for the use of the Radio Committee in order that they might put on a special program which the Radio Committee and the Joint Committee agreed would be effective. We believe that the responses indicate that this expenditure was justified.

There has been no meeting of the Joint Committee's Executive Committee, although the chairman has kept in close touch by correspondence with the Committee, and there has been no occasion for the State Society's representatives to get together.

Respectfully submitted,

Burton R. Corbus, M.D., *Chairman*
Robert H. Fraser, M.D.
Henry A. Luce, M.D.
F. J. O'Donnell, M.D.
W. R. Vaughan, M.D.

ANNUAL REPORT OF TUBERCULOSIS CONTROL COMMITTEE, 1942-43

Your Committee met with the Association of Michigan Sanatorium Superintendents and with the Michigan Sanatorium Commission. These joint bodies proposed certain bills to be presented to the Legislature for the better control of tuberculosis in this state. Members of your Committee were helpful in presenting the necessary data to the Legislature. They enjoyed the excellent support of the MSMS Executive Office in Lansing. All bills proposed were successfully passed—at least the purposes of these proposals were carried out by legislative action.

Additional subsidy for approved county sanatoriums also was approved by the 1943 Legislature and money was appropriated for this purpose. In addition, money was made available to help care for tuberculosis in those counties which were unable to finance it. Workers in state hospitals and sanatoriums, contracting tuberculosis in their work, were made eligible for state care. Your Committee lent a helpful hand when its members were called upon. It feels that the past year has marked an advance in the care of tuberculosis in the State of Michigan.

Through the Preventive Medicine Committee, there was referred to the Michigan Association of Roentgenologists the question of whether roentgenologists should report cases of tuberculosis diagnosed in their laboratories. A suggestion that the roentgenologist merely enclose with the x-ray report, a case report which the referring physician would send in at his own discretion and under his own name, met with objection.

Respectfully submitted,

John B. Barnwell, M.D., *Chairman*
Cecil Corley, M.D.
Joseph L. Egle, M.D.
L. E. Holly, M.D.
W. L. Howard, M.D.
W. B. Howes, M.D.
H. G. Huntington, M.D.
E. J. O'Brien, M.D.
George A. Sherman, M.D.
John Towey, M.D.

CONSUMER EXPENDITURES FOR HEALING SERVICES*
(In Millions of Dollars)

	1929	1930	1931	1932	1933	1934	1935	1936	1937	1938	1939	1940	1941
Physicians and Surgeons, M.D.	1,035.0	1,003.0	897.0	729.0	688.0	766.0	838.0	955.0	1,019.0	1,007.0	1,048.0	1,112.0	1,208.0
Dentists	489.7	469.3	399.7	305.3	278.9	298.1	304.3	333.2	350.6	350.4	370.3	397.8	455.1
Osteopaths	40.7	37.7	34.5	27.4	25.7	28.1	29.8	33.0	35.9	39.4	42.0	44.3	46.8
Chiropractors	48.7	45.6	40.1	29.7	25.6	26.4	28.2	31.8	33.4	33.1	33.6	36.3	39.9
Chiropodists and podiatrists	19.5	18.9	17.2	14.3	13.0	13.0	13.5	15.1	15.3	14.1	15.1	16.6	19.1
Private-duty trained nurses	142.0	130.0	96.0	58.0	48.0	46.0	50.0	55.0	59.0	58.0	59.0	62.0	68.0
Practical nurses and midwives	63.0	62.1	53.7	39.3	35.1	36.7	36.9	39.0	39.7	38.1	38.7	39.0	43.7
Miscellaneous healing groups	29.0	27.6	23.8	17.5	15.6	16.0	16.3	18.5	18.5	16.6	17.6	19.0	21.6
Payments by patient to hospitals and sanitariums:													
(a) Nongovernment hospitals and sanitariums	298.1	302.0	287.8	272.1	248.3	249.6	271.4	284.6	303.2	307.3	330.9	362.6	391.2
(b) Government hospitals and sanitariums	25.2	27.0	27.9	30.0	30.6	31.5	33.3	34.5	36.3	36.7	38.2	39.7	45.2
Net payment to group hospitalization and group health associations	—	—	—	—	—	.1	.4	1.3	3.5	6.9	11.5	18.0	23.6
Student fees for medical care	1.8	1.8	1.9	1.8	1.8	1.8	1.9	2.0	2.1	2.3	2.4	2.5	2.5
Accident and health insurance premiums	177.9	185.8	179.9	153.0	137.9	150.6	163.8	175.6	193.7	202.9	222.6	247.0	271.0
Mutual accident and sick benefit association premiums	51.0	47.0	42.3	35.2	31.1	31.3	32.7	37.1	43.0	49.5	59.3	62.0	65.0

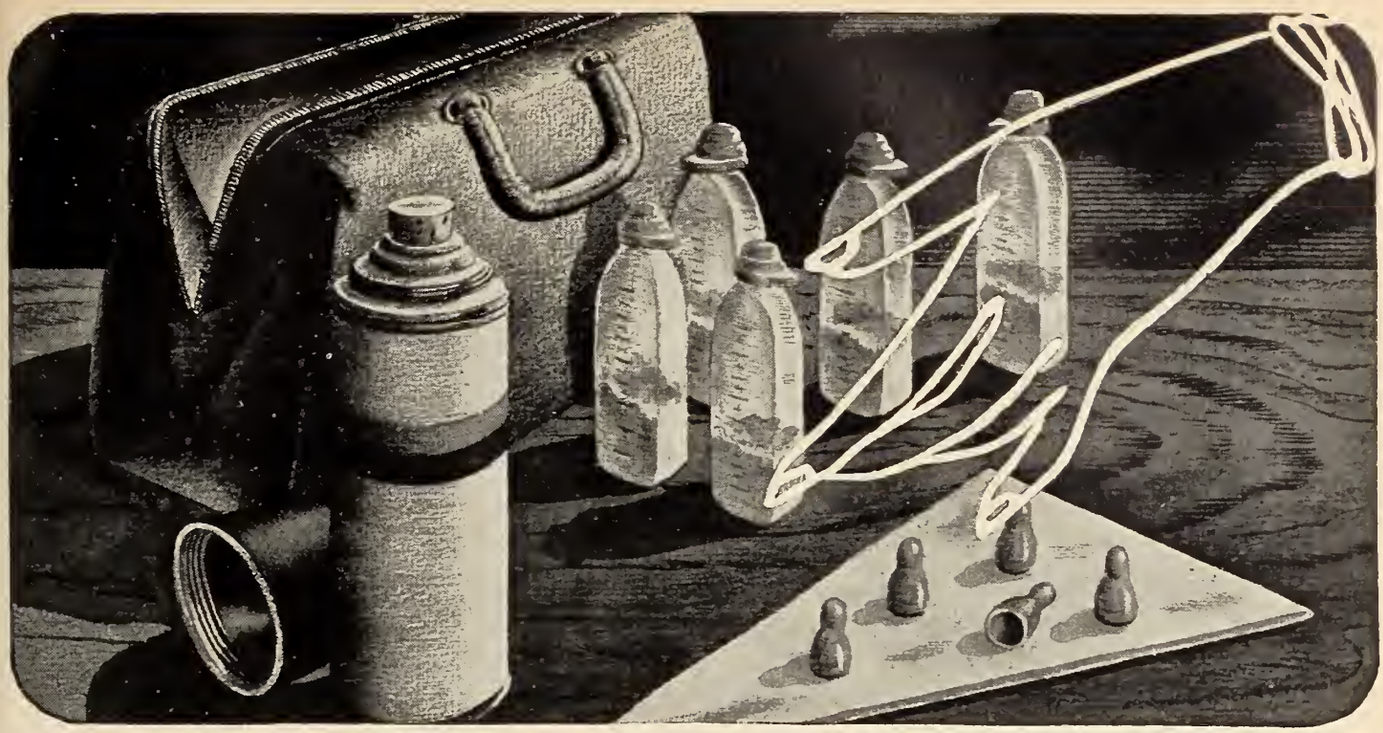
THE 1946 PICTURE

A hypothetical projection of expenditures by commodity groups based on past relationships to the gross national product has also been made by the economists of the Department of Commerce. This is not a forecast but merely an indication of the magnitude of the increase all along the line if a high level of total output is achieved, as anticipated. It is based on the assumption (a) that the war and the immediate postwar reconversion period will be over before 1946; (b) that 96.5 per cent of those seeking employment will have productive jobs; and (c) that prices will be the same as in 1942.

The total expenditure for "Medical Care and Death Expenses" for 1946 has been hypothetically projected at the staggering sum of $4,169,000,000. This is to be compared to the total of $2,766,000,000 spent in 1940 and $2,783,000,000 expended in 1929. Of the four billion plus dollars, a rough estimate indicates the $1,676,000,000 will be expended for the services of Doctors of Medicine alone.

Is it any wonder that certain bureaucrats would like to control the practice of medicine and the healing arts!

*The above table is from "Markets After the War," published by the U. S. Department of Commerce, March, 1943.



SAFE, CONVENIENT, when mother and baby must travel

The mother has only to measure out and place in dry, sterile feeding bottles, the prescribed amount of Similac powder for each individual feeding. The bottles containing the measured Similac powder are then capped, and can be conveniently carried, along with a thermos bottle of boiled water cooled tc about blood heat. At feeding time it is necessary only to pour into one of the bottles containing the measured Similac powder, the prescribed amount of water, then shake until the Similac is dissolved, place a nipple on the bottle, and feed.



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PUBLIC MEETING

THE MICHIGAN STATE MEDICAL SOCIETY ANNOUNCES A PUBLIC ADDRESS BY

SISTER ELIZABETH KENNY OF AUSTRALIA

FRIDAY, SEPTEMBER 24, 1943, 8:30 P.M.—BALLROOM, STATLER HOTEL, DETROIT

Members of the Michigan State Medical Society are urged to invite their patients and the public generally to attend this meeting to hear Sister Kenny outline her pioneer work in the treatment of infantile paralysis. Admission free.

McGRAW MEMORIAL IS ESTABLISHED

Establishment of the Theodore A. McGraw Memorial Scholarship, to be given to the outstanding junior student in the Wayne University College of Medicine, is announced by Dr. Edgar H. Norris, dean of the College. The award, amounting to $100 annually, is made possible by a gift from an anonymous donor. It is intended as a memorial to the late Dr. McGraw, former president of the Detroit College of Medicine and Surgery.

INFANTILE PARALYSIS

A project to make The National Foundation for Infantile Paralysis the only complete central, authentic source of information on Infantile Paralysis in the world was announced by Basil O'Connor, president of the Foundation.

A complete bibliography of all scientific literature that ever has been published pertaining to infantile paralysis is being compiled by the Foundation, and is expected to be ready for publication in book form in the early part of 1944. The first volume will contain a record of all scientific material on poliomyelitis published in the world up to the end of 1943. Subsequently, the data will be kept up to date by publication of annual supplements. Brief abstracts of the more important articles will be included in the bibliography to be published by the Foundation.

This will be the first time there has been compiled a complete international bibliography on infantile paralysis. It will make available to the medical world data that will acquaint research workers with all investigative work that already has been done.

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MSMS ROSTER—SUPPLEMENTAL LIST

(An "M" following a name indicates active military service)

Berrien County

Brown, G. W.....Buchanan
Fredrickson, H. C.....Buchanan
Ingleright, Leon R.....Niles
Lawton, C. V.....Benton Harbor

Houghton County

Buckland, R. S.....Baraga
Burke, J. J.....Hubbell
Willson, P. H.....Chassell
Stewart, G. C.....Painesdale

Ingham County

Cook, Martin J.....Lansing
Rector, Frank L.....Lansing

Ionia-Montcalm County

Lintner, R. C.....Berrien Springs

Macomb County

Borland, Alexander .....Pontiac
Curlett, J. E.....Roseville
Gehringer, Norman F.....Pontiac
Gerls, Frank B.....Pontiac
Hackett, Daniel J.....Pontiac
Hasner, Robert B.....Royal Oak
Kirkup, Norman N.....Hazel Park
Merrill, Lionel N.....Royal Oak
Murtha, A. V.....Pontiac
Neafie, Charles A.....Pontiac
Prevette, Isaac C.....Pontiac
Rupp, Jacob R.....Lawrence, Kan.
Sheffield, L. C.....Pontiac
Sibley, H. A.....Pontiac
Wagner, Ruth E.....Royal Oak
Yoh, Harry B.....Clarkston
Zonnia, Marian E.....Pontiac

Washtenaw County

Harris, B. M.....M
Williamson, F. B.....Ypsilanti
Wilson, Frank N.....Ann Arbor
Palmer, A. A.....M
Newburgh, Louis H.....Ann Arbor

Wayne County

Auble, M. E.....Detroit
Barnes, Donald J.....Detroit
Bennett, Wm. Edw.....Detroit
Buell, Martin F.....Dearborn
Belanger, Wm. Geo.....M
Blaine, Max .....Detroit
Cleage, Louis .....Detroit
Cooley, Thomas B.....Detroit
Cooksey, Warren B.....Detroit
DeWitt, Norman L.....Detroit
Drolshagen, E. A.....Algonac
Galvin, Paul P.....Detroit
Hamil, Brenton M.....Detroit
Harris, I. D.....Detroit
James, Richard G.....Detroit
Jordan, R. Gerald.....Detroit
Kennedy, W. Y.....Detroit
Merriman, K. S.....Detroit
Moore, Doris S.....Detroit
Moore, Milridge B.....Detroit
Opperman, Rudolph .....Detroit
Rieden, James A.....Detroit
Seller, Chas. W.....Detroit
Sakorraphos, Stelios N.....Detroit
Witus, M. .....Detroit
Wood, Wilford C.....Detroit

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A MODERN, comfortable sanatorium adequately equipped for all types of medical and surgical treatment of tuberculosis. Sanatorium easily reached by way of Michigan Highway Number 53 to Corner of Gates St., Romeo, Michigan.

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✣

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GRAND RAPIDS, MICHIGAN

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✶ COUNTY AND PERSONAL ACTIVITIES ✶

100 PER CENT CLUB FOR 1943

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Branch County—James Bailey, M.D., Secretary
Cass County—K. C. Pierce, M.D., Secretary
Chippewa-Mackinac—David Littlejohn, M.D., Secy.
Clinton County—T. Y. Ho, M.D., Secretary
Dickinson-Iron—E. B. Anderson, M.D., Secy.
Eaton County—L. G. Sevener, M.D., Secretary
Gogebic County—F. L. S. Reynolds, M.D., Secy.
Huron County—J. Bates Henderson, M.D., Secretary
Jackson County—H. W. Porter, M.D., Secy.
Lapeer County—H. M. Best, M.D., Secretary
Livingston County—Ray Duffy, M.D., Secretary
Luce County—Sidney Franklin, M.D., Secretary
Manistee County—C. L. Grant, M.D., Secretary
Mecosta-Osceola-Lake—John A. White, M.D., Secretary
Menominee County—Wm. S. Jones, M.D., Secy.
Midland County—H. H. Gay, M.D., Secretary
Muskegon County—Helen Barnard, M.D., Secy.
Newaygo County—W. H. Barnum, M.D., Secy.
Oceana County—W. Heard, M.D., Secretary
Ontonagon County—W. F. Strong, M.D., Secy.
Saginaw County—R. S. Ryan, M.D., Secretary
Sanilac County—E. W. Blanchard, M.D., Secy.
Shiawassee County—I. W. Greene, M.D., Secy.
St. Clair County—A. L. Callery, M.D., Secy.
St. Joseph County—R. J. Fortner, M.D., Secy.
Wexford-Missaukee—B. A. Holm, M.D., Secy.

The above medical societies have certified 1943 dues for every member of their respective societies.

Congratulations, members of the 100 Per Cent Club!

Kathryn M. Bryan, M.D., a practitioner in Manistee for many years, left Michigan May 1 to become associated with the staff of the Logansport State Hospital, Logansport, Indiana.

* * *

A Wayne County Board of Health has been named consisting of George Boik, chairman, Charles E. Brake, Joseph Henry McCann, L. K. Babcock, M.D., Detroit, and John W. Nagle, M.D., Wyandotte. The board has chosen as its secretary Stanley Nowicki, Director of the County Research Bureau.

Due to personnel shortages, only a skeleton staff will be hired at this time, consisting of a director, an assistant director, a sanitary engineer, four sanitarians, a supervising nurse, four general staff nurses, a statistical clerk-stenographer and a laboratory technician.

Physicians appearing as expert witnesses in malpractice cases should do so without fee, unless expense is incurred or special study or investigation is required. No charge should be made for appearing either on behalf of the defendant or the plaintiff. If both these things were done, the insurance costs of the defendant would be drastically reduced, and subsidized, biased, and highly-colored testimony would be eliminated.

—Louis J. Regan, M.D., Hollywood, California.

* * *

Udo J. Wile, M.D., and Edna B. Kearney, M.S., Ann Arbor, are authors of "Morphology of Treponema Pallidum in the Electron Microscope: Demonstration of Flagella," which appeared in JAMA, May 15.

C. J. France, M.D., Morton Barnett, M.D., and *F. F. Yonkman, M.D.,* of Detroit, are authors of "Recovery from Eight Grams of Barbiturates in Attempted Suicide," in the same issue.

* * *

Calling all doctors who have taken postgraduate work other than in our Michigan Postgraduate program: Please send details for evaluation and credit to L. Fernald Foster, M.D., Secretary, Michigan State Medical Society, 2020 Olds Tower, Lansing. If possible, send by return mail in order that credit may be included on your report for the fiscal year which ends September, 1943.

* * *

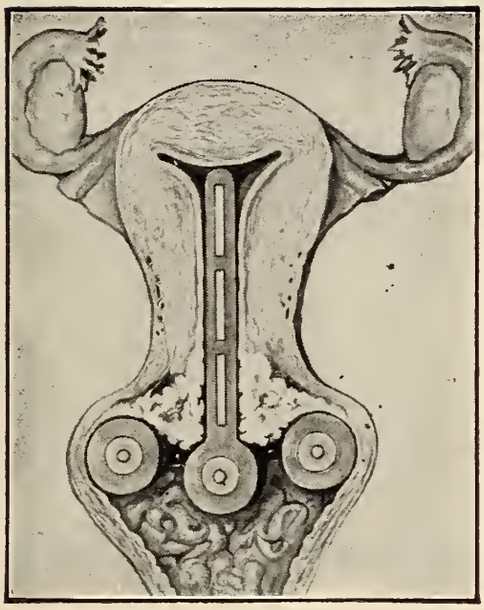
D. J. McColl, M.D., of Port Huron was honored with a testimonial dinner by the St. Clair County Medical Society on May 25. Tribute was paid to Dr. McColl on the completion of fifty years of service to his profession. The Society presented Dr. McColl with a desk set and a portfolio autographed by members of the organization and guests at the testimonial meeting. Neil J. McColl, M.D., president of the Society and a brother of the guest of honor, presided at the meeting. Among out-of-town guests was Clarke McColl, M.D., of Detroit, son of D. J. McColl, M.D.

ADDITIONAL BENEFITS OF MEMBERSHIP

(Continued from Page 476, June MSMS Journal)

14. More definite assurance of reimbursement for services in accident cases through the State Society's agreement with insurance companies, called "Michigan Hospitals and Medical Payments Plan."
15. Information and action on fraudulent schemes, inferior products, and pseudo-medical practitioners through close coöperation with the State Board of Registration in Medicine, other departments of your State, and the AMA Councils.
16. A position of social responsibility in the community—the trust and opportunity of the medical profession to assume leadership in all medical matters.
17. Continual development and maintenance of confidence in the medical profession—in YOU—by a constant alert program of public relations by your state society.
18. Results from unified action to solve problem of complete distribution of medical care to all groups in the state.

IMPROVE YOUR RESULTS IN CANCER OF THE CERVIX



CONSISTENTLY high percentages of 5-year cures in Carcinoma of the Cervix are reported by institutions employing the French technique illustrated here. Ametal rubber applicators encase the heavy primary screens and provide ideal secondary filtration to protect the vaginal mucosa. Radium or Radon applicators for the treatment of Carcinoma of the Cervix and provided with Ametal filtration are available exclusively through us. Inquire and order by mail, or preferably by telegraph or telephone reversing charges. Deliveries are made to your office or hospital for use at the hour you may specify.

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Stainless, greaseless, and clinically non-irritating and non-allergic, it may safely be prescribed for continued home use by the patient. Although it is a tar derivative, and maintains the therapeutic properties inherent in the base tars, it is entirely free from the "tarry" odor associated with ordinary tor preparations.



Carried in a bland vanishing cream that is rubbed into the skin without leaving a greasy film and so requires no dressing, Tarbonis Cream wins rapid patient acceptance.

Many medical directors of vital Michigan defense plants have found Tarbonis Cream most effective in combatting industrial dermatitis.

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The amount of KARO prescribed is 6 to 8% of the total quantity of milk used in the formula—one ounce of KARO in the newborn's formula is gradually increased to two ounces at six months.

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17 Battery Place • New York, N. Y.

The Saginaw County Medical Society, in special session May 18, adopted a resolution which recommended that the dues of the Michigan State Medical Society be increased, up to a maximum of $50.00 per year, sufficient to provide additional facilities and services requisite to the well-being of the medical profession of Michigan which cannot be supplied on the present inadequate MSMS dues.

* * *

Your Friends

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Wall Chemicals Corporation, Chicago, Illinois
Westinghouse X-Ray Company, Inc., Detroit, Michigan
White Laboratories, Inc., Newark, New Jersey
Winthrop Chemical Company, Inc., New York, New York
John Wyeth & Brother, Philadelphia, Pennsylvania
Zimmer Manufacturing Company, Warsaw, Indiana

The above firms were among the exhibitors at the 1942 MSMS annual meeting in Grand Rapids and helped make possible for your enjoyment one of the outstanding state medical meetings in the country. Remember your friends when you have need of equipment, medical supplies, appliances or service.

* * *

The Michigan State Medical Society and the State Bar of Michigan have united in a campaign against venereal disease.

Representatives of both these professional organizations met May 23 and appointed a joint committee to devise ways and means to control venereal diseases, by education, by legislation, and by increasing necessary hospital facilities. Members of the joint committee are F. J. Weber, M.D., Lansing, Chairman; H. L. Keim and L. W. Shaffer, M.D., of Detroit; and R. S. Breakey, M.D., and LeMoyne Snyder, M.D., of Lansing; Attorneys John L. Potter, Detroit; James J. Dunn, Battle Creek; Raymond W. Fox, Kalamazoo.

* * *

Special Membership—County society secretaries are requested to submit to the Michigan State Medical Society the names of any physicians for whom special membership (Retired or Emeritus) in the State Society will be sought at the 1943 MSMS House of Delegates in September, 1943, in Detroit, in accordance with Chapter I, Section 8 of the MSMS By-Laws which states:

"Only active members are eligible for Retired or Emeritus Membership. Transfer shall be by election in the House of Delegates. Requests for transfer shall be accompanied by certification by the Secretary of the State Society, as to years of practice and years of membership in good standing. The county society of such members shall make request for certification, in writing, to the Secretary of the State Society thirty days in advance of an annual session."

* * *

P. R. Urmston, M.D., Michigan Consultant of the War Manpower Commission, advises that on December 31, 1942, Michigan was 50 per cent over her quota of Doctors of Medicine in the armed forces, and further that the State met her 1943 quota on January 31, 1943! "We are not taking any more Doctors of Medicine from Michigan, at present, for the armed forces. All physicians are frozen in their present locations and

must serve their communities, unless released by Procurement and Assignment Service."

Relocations—Doctor Urmston advises that approximately thirty physicians are needed for relocation, and is asking for volunteers for various communities. Physicians who are interested may write P. R. Urmston, M.D., Davidson Building, Bay City.

The Michigan State Medical Society's annual meeting will be held September 22-23-24 at the Statler Hotel, Detroit.

You will be eager to get away from the cares of your practice to enjoy a few days of postgraduate medical work, for which credit will be given towards your Fellowship or Associate Fellowship in Postgraduate Medical Education. Write to the Committee on Hotels, 2020 Olds Tower, Lansing, for your reservation.

The National Foundation for Infantile Paralysis and the University of Michigan have joined in a long-range program for the training of doctors, public health workers and laboratory technicians to study infantile paralysis and other virus diseases.

This program, which has been developing for three years, was expanded to its full scope on June 1 when the University opened its new three-story building for its School of Public Health.

The new structure will house a unit devoted entirely to work in virus diseases, particularly infantile paralysis. The virologists who will be trained under the program will be prepared to attack the whole realm of virus diseases, including not only infantile paralysis but also influenza, atypical pneumonias, St. Louis and equine encephalitis, measles, chicken-pox, smallpox and mumps. A three-year grant of $120,000 has been made by the National Foundation.

* * *

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(b) *Unemployment benefits.* Eligible wage earners who become unemployed receive cash benefits in proportion to their wages, with a maximum limit, when unemployed. There are certain requirements for eligibility, waiting period, and a limit as to the number of weeks for which these benefits are payable. Unemployment benefits are administered by state commissions under supervision of the Social Security Board.

At present, employers pay a tax of 3 per cent of the first $3,000 of the annual wage of the employes; employe pays nothing. Credit of 2.7 per cent allowed by Federal government for tax paid into state unemployment compensation funds. State taxes may vary but most are 2.7 per cent. United States Employment

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offices are set up under the Social Security Act to service employment.

(c) *Public assistance.* Grants to states are made under the Act for old age, dependent children, maternal and child welfare, the blind, and public health work.

—*Insurance Economics Society,* Chicago

* * *

UPPER PENINSULA MEDICAL SOCIETY MEETING

The 46th annual meeting of the Upper Peninsula Medical Society will be held at Iron Mountain, July 14. The scientific program and a short recreational and social period in the late afternoon will take place at the Pine Grove Country Club.

The program is as follows:

9:30 "The Abortion Problem"—Alexander M. Campbell, M.D., Grand Rapids, Maternal Health Consultant, Michigan State Medical Society—Michigan Department of Health

10:15 "Anemias"—E. J. Teeter, M.D., Indianapolis, Indiana, Director, Eli Lilly Research Laboratories

11:00 "Occupational Dermatosis"—H. R. Foerster, M.D., Milwaukee

11:45 Recess

12:15 Luncheon

1:00 Remarks—L. Fernald Foster, M.D., Bay City, Secretary, Mich. State Med. Society

1:30 Recess

2:15 "Endometriosis"—H. H. Cummings, M.D., Ann Arbor, President, Mich. State Med. Society

3:00 "Vaginal Hysterectomy" (illustrated)—John M. Waugh, M.D., Rochester, Minn. Dept. of Surgery, Mayo Clinic

3:45 "Methods of External Fixation"—Herman C. Schumm, M.D., Milwaukee, Wisconsin

4:30 "Diseases of the Prostate Gland"—Reed M. Nesbit, M.D., Ann Arbor, Professor of Genito-Urinary Surgery

5:15 Recess

6:30 Dinner

8:00 Panel Discussion—Discussants to be selected.

9:00 Adjournment.

The Dickinson-Iron County Medical Society is the host society. The committees in charge of the convention are:

Executive Committee.—W. H. Alexander, M.D., President, Upper Peninsula Medical Society; E. B. Andersen, M.D., secretary; R. E. Hayes, M.D.; D. R. Smith, M.D.; R. E. White, M.D.

Entertainment Committee.—W. H. Huron, M.D.; Geo. Boyce, M.D.; Wm. Fiedling, M.D.; D. A. Levine, M.D.; Clifford Menzies, M.D.; L. E. Irvine, M.D.

Publicity Committee.—E. R. Addison, M.D.; Wm. Kofmehl, M.D.; G. Fredrickson, M.D.

1943 TECHNICAL EXHIBIT

Exhibitors at the 1943 "Postgraduate Conference on War Medicine"—the 78th annual meeting of the Michigan State Medical Society, to be held at the Statler Hotel, Detroit, September 22-23-24, include:

Baker Laboratories	Cleveland, Ohio
Bard-Parker Company, Inc.	Danbury, Conn.
The Borden Company	New York, N. Y.
Burroughs Wellcome & Co.	New York, N. Y.
Cameron Heartometer Co.	Chicago
Cameron Surgical Company	Chicago
S. H. Camp & Company	Jackson, Michigan
Ciba Pharmaceutical Products	Summit, New Jersey
Cottrell-Clarke, Inc.	Detroit
The Cream of Wheat Corporation	Minneapolis, Minn.
Davis & Geck, Inc.	Brooklyn, N. Y.
Doho Chemical Corporation	New York, N. Y.
Ernst Bischoff Company, Inc.	Ivoryton, Conn.
General Electric X-Ray Corporation	Chicago
Gerber Products Company	Fremont, Michigan
Hack Shoe Company	Detroit
Hanovia Chemical & Mfg. Company	Newark, N. J.
J. F. Hartz Company	Detroit
H. J. Heinz Company	Pittsburgh, Pa.
Holland-Rantos, Inc.	New York, N. Y.
G. A. Ingram & Company	Detroit
A. Kuhlman & Company	Detroit
Lea & Febiger	Philadelphia, Pa.
Lederle Laboratories	Chicago
Libby, McNeill & Libby	Chicago
Eli Lilly & Company	Indianapolis, Ind.
J. B. Lippincott Company	Philadelphia, Pa.
M & R Dietetic Laboratories	Columbus, Ohio
Mead Johnson & Company	Evansville, Ind.
Medical Arts Surgical Supply Co.	Grand Rapids, Mich.
Medical Protective Company	Fort Wayne, Ind.
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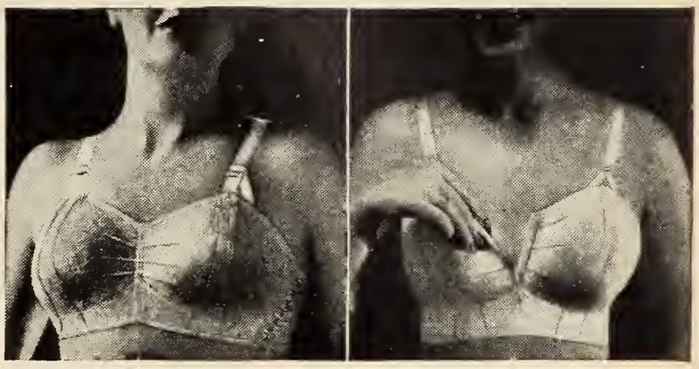
HEALTH DEPARTMENT CHANGES

Effective June 1, Baraga County Health Department united with the Houghton-Keweenaw Health Department, with A. D. Aldrich, M.D., of Houghton as full-time Health Director.

Ontonagon County united with Iron County to form the Iron-Ontonagon District Health Department, with L. C. Bate, M.D., as Director.

C. C. Corkill, M.D., has resigned as Director of the Menominee County Health Department, July 1, to go into private practice. Alexander Witkow, M.D., Director of the Dickinson County Health Department, will serve part time as Director of the Menominee Department.

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Acknowledgment of all books received will be made in this column and this will be deemed by us as a full compensation of those sending them. A selection will be made for review, as expedient.

THE INNER EAR, Including Otoneurology, Otosurgery, and Problems in Modern Warfare. By Joseph Fischer, M.D., Staff member Beth Israel Hospital, Boston, formerly Associate of Adam Politzer, and Senior Otolaryngologist with Gustav Alexander, Policlinic of Vienna, and Louis E. Wolfson, M.D., Instructor in Ear, Nose and Throat, Tufts Medical School. New York: Grune and Stratton. 1943. Price $5.75.

A tremendous amount of material about the physiology, neurology, and surgery of the inner ear is presented in this 421-page book. Dr. Fischer has a great store of knowledge from his teaching experience, and the faculty of presenting it. The physiological symptoms and phenomena, with methods of diagnosing the intricate inner ear manifestations, are given. Inflammatory diseases, labyrinthine complications and a section on war injuries present the latest knowledge on difficult subjects. This field of research is well covered. For the deep student of Otology this book is invaluable.

A MANUAL OF CARDIOLOGY. By Thomas J. Dry, M.A., M.B., Ch.B., M.S. In Medicine. Assistant Professor of Medicine, University of Minnesota (Mayo Foundation): Consultant in Section on Cardiology, Mayo Clinic. 310 pages with 80 illustrations. Philadelphia and London: W. B. Saunders Company, 1943. Price $3.00.

This manual is a short introduction to the study of a great bulk of material in problems of the heart that are too complex for ready availability. It is complete with illustrations and charts, and guides in diagnosis and treatment. The electrocardiogram is lucidly explained. For the busy practitioner this is a valuable book.

MANUAL OF INDUSTRIAL HYGIENE AND MEDICAL SERVICE IN WAR INDUSTRIES. Issued under the auspices of the Committee on Industrial Medicine of the Division of Medical Sciences of the National Research Council. Prepared by the Division of Industrial Hygiene, National Institute of Health, United States Public Health Service. William M. Gafafer, D.Sc., editor. 466 pages. Philadelphia and London: W. B. Saunders Company, 1943. Price $3.00.

This is a one-volume encyclopedia of up-to-date information on industrial medicine which covers the many new problems produced by the War and by the entry in large numbers of women into factory work. It is designed to supplement the information of men already familiar with industrial medicine, and as a guide to the men who have taken up this line of practice in the present emergency, for the first time.

Contributors to this volume include physicians, engineers, public health service directors and consultants. Plans for new medical units, dispensaries or plant hospitals are outlined in full, and suggestions made for the enlargement of medical services in older industries where plant personnel has enlarged greatly. This includes building plans, records, nursing services, the duties of the plant physician and a complete analysis of the industrial physician's problems.

Dr. W. C. Dreessen outlines the problem of occupa-

tional disease as it is found in different sectors of the country, and in each state, and Dr. Louis Schwartz has an excellent chapter on occupational dermatoses, which lists in detail all of the common irritants used in plants which might produce skin reactions. This is most complete.

Medical control of respiratory diseases, venereal disease control, industrial psychiatry, health education, industrial fatigue and nutrition in industry are all given consideration. Plant sanitation, heating, ventilating and air conditioning are well discussed. A new problem, the manpower problem in war industries, is completely presented by Drs. Flinn, Brinton and Gafafer, taking up maximum use of manpower, women in industry, and absenteeism. This book should be in the hands of every industrial physician, and should be a part of the plant library, for it is useful not only to the physician, but to everyone concerned with industrial hygiene.

THE KENNY CONCEPT OF INFANTILE PARALYSIS AND ITS TREATMENT. By John F. Pohl, M.D., Clinical Assistant Professor of Orthopedic Surgery, University of Minnesota; in collaboration with Sister Elizabeth Kenny, Honorary Director, The Elizabeth Kenny Clinic of Australia: Honorary Director the Elizabeth Kenny Institute, Minneapolis; Guest Instructor University of Minnesota Medical School; with a foreword by Frank R. Ober, M.D., President, The American Orthopedic Association. Saint Paul: Bruce Publishing Co. 1943. Price $5.00.

Sister Kenny has taught us an entirely new concept of the treatment of infantile paralysis. She has made certain interpretations of the disease that are at variance with what was accepted, and as a result has made a great contribution to treatment. Dr. Pohl has studied Sister Kenny's work, and is presenting it in very complete and clear style; well illustrated, and thoroughly analyzed. After all, it is the result that counts, and this method offers far more than has been offered before. This book presents pictures and text of the highest type. All persons interested in the treatment of infantile paralysis will find this book indispensable.

THE ANATOMY OF THE NERVOUS SYSTEM. By Stephen W. Ranson, M.D. Seventh Edition. Octavo of 520 pages, illustrated. Philadelphia: W. B. Saunders, Company, 1943. Cloth, $6.50.

"The Anatomy of the Nervous System" by Ranson has been very well prepared to give the reader and student of medicine a very well developed and carefully prepared study of the general nervous system. The book is thoroughly comprehensive, and all details are duly accentuated.

The book is very thorough in the general study and discussion of the nervous system. The form of presentation and the sequence of chapters is carefully handled, and most beneficial to the reader, thus making the continuity of the book excellent. The diagrams and drawings show a great deal of skill and detail in their presentation. Likewise, the drawings are generously distributed at the appropriate places, throughout the book, to establish in the reader's mind the details of the vast nervous system of the human body.

The style of the book is a very easy one for the general reader. The descriptions of the various parts of the nervous system, the responses and the far-reach-

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OPHTHALMOLOGY—Two Weeks' Intensive Course starting September 27. Course in Refraction Methods, October 11.
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ing magnitude of the nervous system is particularly well presented to the reader. The author's choice of diction is very pleasing, too.

The chapter devoted to "The Sympathetic Nervous System" is especially well presented for the general practitioner. The drawings and diagrams are suitable for the student studying the anatomy of the nervous system. The presentation of the Sympathetic Nerves and Plexuses is well developed. Likewise, the chapter on "The Cerebellum" is splendid, for it gives the reader a well-rounded summary of the cerebellum. The treatment of the "Histology of the Cerebellar Cortex" is an outstanding section of the book.

Doctors should find this book a very thorough presentation of the Nervous System, and a valuable book for reference and research in their study of the nervous system. The book should be a valuable one for the practitioner to possess for his study, or for his general source of information and reference for the many studies of the nervous system. The book has definite value to the doctor of medicine, whatever his field or specialty may be, for the anatomy of the nervous system is definitely a basic foundation for all advanced stages of medicine or surgery.

THE PRINCIPLES AND PRACTICE OF OBSTETRICS. By Joseph B. DeLee, A.M., M.D., Formerly Professor of Obstetrics and Gynecology, Emeritus, University of Chicago; Consultant in Obstetrics, Chicago Lying-in Hospital and Dispensary; Consultant in Obstetrics, Chicago Maternity Center; and J. P. Greenhill, B.S., M.D., Attending Obstetrician and Gynecologist, Michael Reese Hospital; Obstetrician and Gynecologist, Associate Staff, Chicago Lying-in Hospital; Attending Gynecologist, Cook County Hospital; Professor of Gynecology; Cook County Graduate School of Medicine. Eighth Edition, Entirely Reset. 1101 pages with 1074 illustrations on 841 figures, 209 of them in colors. Philadelphia and London: W. B. Saunders Company, 1943. Price $10.00.

Seven editions have preceded this one and the need for another edition testifies to the universal acceptance of Dr. DeLee's teaching. Two years before his death he asked Dr. Greenhill to undertake this revision. He was consulted and approved much of the addition, corrections and deletions. New chapters have been added dealing with endocrinology as related to Obstetrics and Gynecology, Vitamin K, Vitamins, Roentgenography, the Sulfonamide Drugs, and the Waters Extraperitoneal Cesarean Section.

The chapters on Toxemias of Pregnancy were rewritten to conform to the classification proposed by the American Committee on Maternal Health. Many of the illustrations are new.

The book is compact for one of its scope. Well printed, with readable types and paper, DeLee's has been almost the obstetrician bible. This volume is no exception.

TRANSURETHRAL PROSTATECTOMY. By Reed M. Nesbit, M.D., F.A.C.S., Associate Professor of Surgery, University of Michigan Medical School, In Charge of the Section of Urology, Department of Surgery. With 94 drawings illustrating technique by William P. Didusch, and a chapter on the vascular supply of the Prostate Gland by Ruben H. Flocks, M.D. Springfield, Illinois: Charles C. Thomas, 1943. Price $7.50.

Our own Reed Nesbit has produced an outstanding book outlining with clear detail the techniques, practices and procedures of the transurethral operation on the prostate. There is detailed description of the in-

struments and their use, management of the case, and an analysis of the experience of his clinic. The illustrations are clear, sufficiently large, and numerous. The book closes with a very complete bibliography. This book is by its completeness a standard reference, and will become an invaluable guide to the surgeon beginning the use of this technique.

HOPE DEFERRED. By Jeanette Selets. New York: The Macmillan Company, 1943. Price $2.75.

Miss Seletz furnished a field day for the layman, who for once is given a look-see into the inner wheels and springs of the medical profession, to find out what makes it "tick." A group of medical students is conducted from the dissecting room, through grilling study, bull sessions, student escapades, and the smart white and starch of their internships, to final success and distinction for some.

The characters are cameo clear. There is the fine and upstanding Jane Brent, and this doctor of fiction does not have a shock of red hair, freckles and a firy temper. Then there is Tommy the lovable playboy, Buckley the southern "colonel, suh," and Stokes the book worm, the magnificent Dean Larsen, and the gifted and fatherly Dr. Shultz, lovely Carol, and Mary the nurse.

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stir forgotten heartaches. The book has tragedy, two delightful love interests and brilliant dialogue. There are two distinct disappointments: The title has somehow a forbidding sound, and Jane and Carol did not "live happily ever after." Why? Compromise! Thou too art a jewel in marriage. But anyway, you will enjoy the book.

NUTRITION AND DIET in HEALTH AND DISEASE. By James S. McLester, M.D., Professor of Medicine, University of Alabama, Birmingham, Alabama. Fourth Edition, Thoroughly Revised. 849 pages. Philadelphia and London: W. B. Saunders Company, 1943. Price $8.00.

Dr. McLester, in his introduction referring to progress in medicine, quotes "the man who sleeps over eight hours takes a chance." In this fourth edition the chapter on Vitamins is largely rewritten to cover new nomenclature, newly discovered vitamins, et cetera. The vitamins are individually discussed. Also minerals, water balance, roughage, cost of food, milk and its products, and so on.

Diet is discussed in health of infant, school-age child, and old age, food requirements in relation to reproduction, and in deficiency diseases due to vitamins or other causes. Diabetes, gout, obesity, food allergies, kidneys and urinary tract diseases, digestive problems all have their chapters.

Principles and practice are presented, with dozens of tables and hundreds of menus for every conceivable need.

The appendix covers special methods of feeding, storing, processing and cooking foods and a profusion of tables.

This book would seem to be almost indispensable in many classes of medical practice, including all those whose responsibility is the feeding of the sick as well.

OBSTRETICAL PRACTICE. By Alfred C. Beck, M.D., Professor of Obstetrics and Gynecology, Long Island College of Medicine, etc., Third Edition with 1,064 illustrations, 93 pages. Baltimore: The Williams and Wilkins Company, 1942. Price $7.00.

A full and comprehensible book that will impel the undergraduate to greater effort in mastering the subject of obstetrics, and will assist the active obstetrician to meet with confidence and solve the problems that arise, in a manner guaranteeing the best and safest results to the mother and to the baby.

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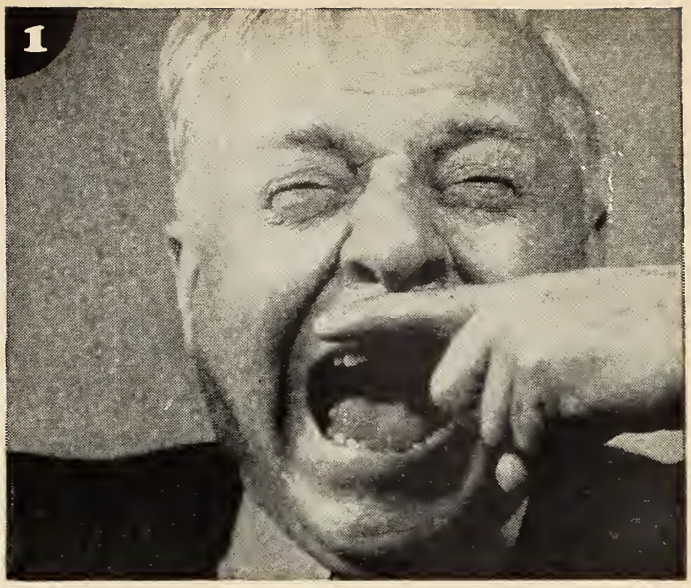
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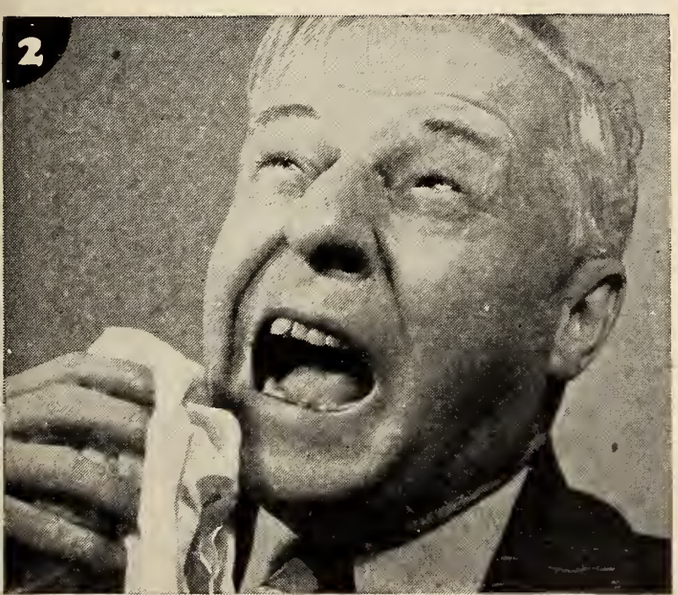
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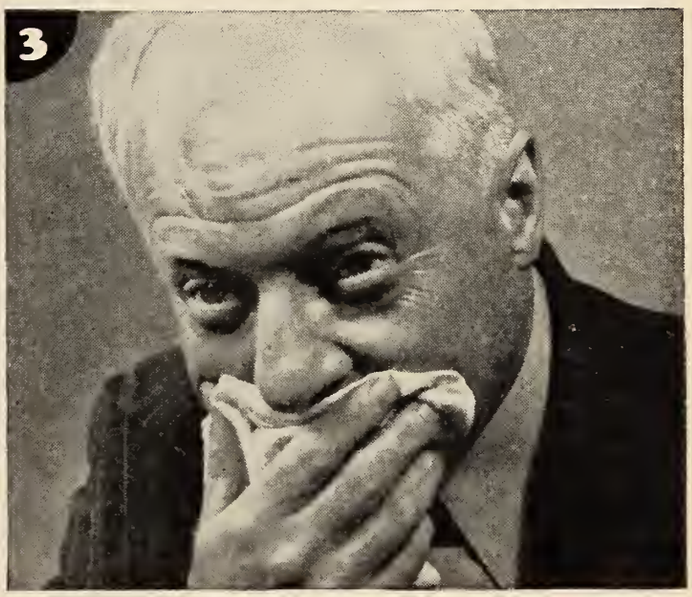
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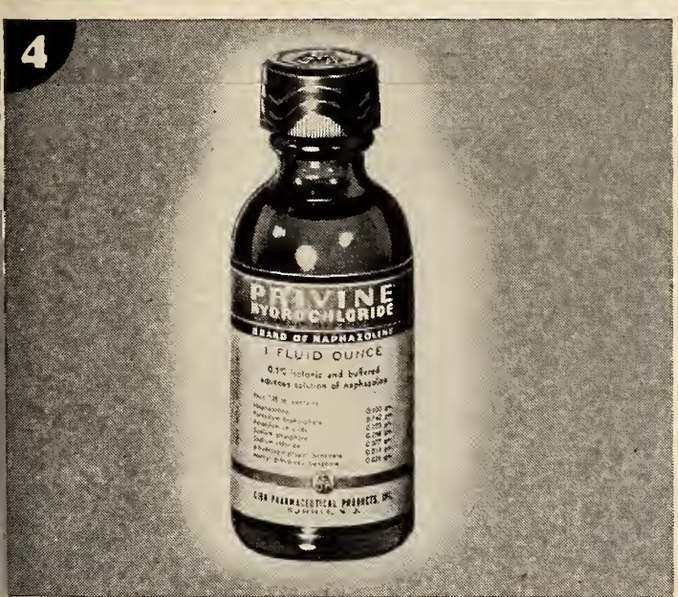
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WAR BULLETINS

TROPICAL MEDICINE

The medical advisory committee of The American Foundation for Tropical Medicine, Inc., authorized grants to six North American medical schools totalling $26,100 during the first quarter of 1943, at a meeting of directors of the Foundation in New York City on April 14.

These grants, made possible by contributions and pledges for the current year of $60,100 by nineteen American corporations, are being used to strengthen teaching or research programs in tropical medicine and parasitology at the various schools. The approved projects were selected by the medical committee among a number of applications.

Medical schools to receive aid were: New York University, College of Medicine; Tufts College Medical School; Tulane University School of Medicine; University of Manitoba Faculty of Medicine; University of Nebraska College of Medicine and Yale University School of Medicine.

The Foundation's program, adopted at the annual meeting of members in January, calls for the collection and disbursement of $100,000 among medical schools and scientific journals and for special projects which fall within the scope of the Foundation's activities. Dr. Curran stated that the full sum of $100,000 will be needed to complete the current program of aid.—*American Foundation for Tropical Medicine.*

THE FIGHT AGAINST MALARIA

The Japs have withdrawn or have been conquered on some of the islands in the vast expanses of the South Pacific, but the disease-axis which makes a bastion out of these "tropical paradises" stubbornly hems in our jungle fighters. The battle with disease is incessant. There are no breathers between engagements and the continuous, pitched battle against a numerically large foe cannot be decisively won, but must be held at bay.

Fighting side by side with the Marines in their unrelenting battle against the Japs is an unsung detachment whose weapons are chemicals, drugs, and sanitation. This unacclaimed yet vitally important unit, is known as the "Skeeter Beaters" or Anti-Malaria Brigade.

Enemies of this ingenious disease-eradication force are numbered in the billions—large waves of mosquito marauders staging day and night infection attacks—which penetrated deep into our long lines unopposed until organized malaria-control units began wiping them out by the millions. Now, these "Skeeter Beaters" are slowly conquering the greatest malaria problem since the building of the Panama Canal.

Two major types of strategy are employed—cure and prevention. Men contracting malaria, or suspected of having it, are given immediate tests and treatments. First signs of malaria are generally headaches, extreme fatigue, and fever or chills. Blood tests are often given to determine whether men showing symptoms are afflicted with this dread jungle disease.

Every known anti-malarial drug is used in treating the men, including atabrine which has proved successful in battle tests. Field treatment enables the men to continue in combat. Lingering cases of malaria are evacuated to battle-equipped base hospitals.

To carry out the strategy of prevention, the malaria unit wages an offensive war against the mosquitoes. Swamps and other breeding places are invaded and sprayed with a coating of oil. Millions of mosquitoes are killed in the larvæ stage—before they have an opportunity to become carriers of the disease.

Every jungle fighter is also equipped with a mosquito net, a practical safeguard against the malaria-carrying enemy.

The battle against disease is not confined to the Marines. All of the fighting forces must meet and solve the problem. But because they are a swift, mobile force and thus carry only essential equipment, the problem for them is more acute. They have met and conquered their human enemies against tremendous odds, and the malaria unit, fighting with them, is endowed with the same spirit. It, too, is meeting and beating the enemy—malaria—on its own grounds.—*Public Relations Section, U. S. Marine Corps.*

GRADUATE MEDICAL COURSES FOR PHYSICIANS IN ARMED FORCES

To extend to the physicians in the armed services the best facilities of American medicine in the interest of our fighting men, a series of Wartime Graduate Medical Meetings is in the process of organization under the auspices of the American Medical Association, the American College of Physicians and the American College of Surgeons, *The Journal of the American Medical Association* announced in its May 1 issue.

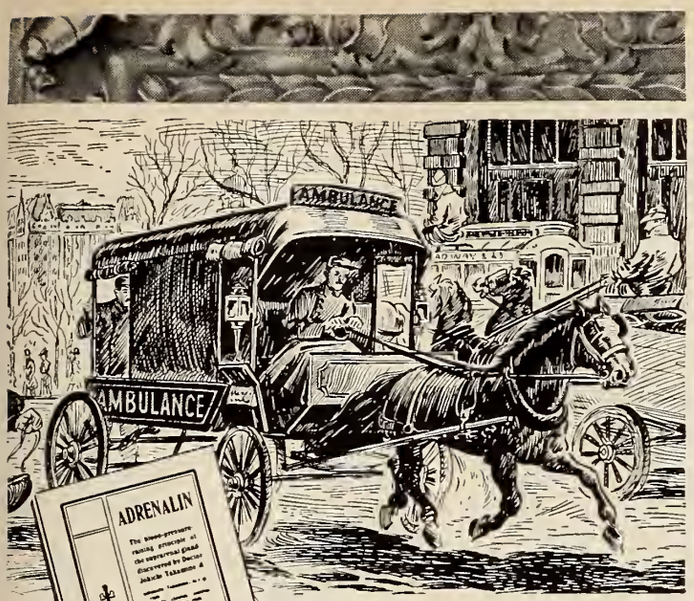
These meetings are authorized, as far as they concern the armed forces, by the Surgeon Generals of the Army, Navy and Public Health Service. The organizations concerned have appointed a committee of three men—one from each organization—to proceed with the work of administration.

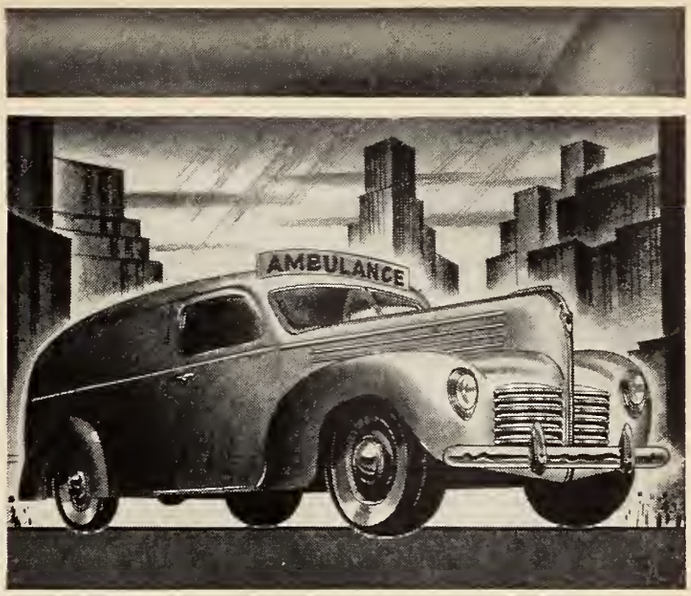
It is proposed to hold the meetings in service hospitals. Qualified authorities have been appointed as national consultants in the various special fields of medicine.

CHANGES IN ACTIVITY AND OCCUPATION BULLETIN NO. 33-6

Michigan State Headquarters, National Selective Service, has issued a memorandum to all Local Boards, Boards of Appeal and Government Appeal Agents call

(Continued on Page 586)





Adrenalin marches on

"The therapeutic applications of adrenalin are already numerous and new uses for it are constantly being found out by different experimenters. Generally speaking, adrenalin, when locally applied, is the most powerful astringent and hemostatic known . . . and it is the strongest stimulant of the heart . . . it will unquestionably attain to a prominent place in the materia medica."

A Parke-Davis publication issued in 1902.

Today—four decades after isolation and crystallization of ADRENALIN* (epinephrine hydrochloride)—a great volume of literature attests to the high place it has attained in materia medica. Physicians know its amazing record as a circulatory stimulant, vasoconstrictor and hemostatic. ADRENALIN is the 20th Century's first great medical discovery. No trade-marked product has found wider acceptance; none enjoys a wider field of usefulness.

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Say you saw it in the Journal of the Michigan State Medical Society

CHANGES IN ACTIVITY AND OCCUPATION BULLETIN NO. 33-6

(Continued from Page 584)

ing attention to changes made in Activity and Occupation Bulletin No. 33-6. Students, Regular Courses, Scientific and Specialized Fields now reads, "That if he continues his progress he will graduate from such course of study within twenty-four months from the date of certification."

To the list of scientific and specialized fields add "Agricultural Engineers" and delete "Heating, Ventilating, Refrigerating, and Air Conditioning Engineers."

Students, Medical, Dental, Veterinary, Osteopathic, Theological has been changed to read: "It is certified by the institution in which he is pursuing the preprofessional course of study that if he continues his progress he will complete such preprofcssional course of study within twenty-four months from the date of certification." Also:

"It is certified by a recognized medical, dental, veterinary, osteopathic, or theological college that he is accepted for admission, and will be admitted to undertake professional studies upon completion of his preprofessional work."

Students of Agriculture, Forestry, Pharmacy, and Optometry has been changed to read: "That if he continues his progress he will graduate from such course of study within twenty-four months from the date of certification."

Add: "That the number of students in the first or freshman class in the institution pursuing such course of study does not exceed 150 per cent of the average annual number of students graduating at the Bachelor Degree level during the three academic years 1939-40, 1941-42."

DEHYDRATED PRODUCTS AVAILABLE TO INSTITUTIONS

Because Government requirements for dehydrated carrots and sweet potatoes are smaller than was anticipated, these products will be available for civilian use during the coming year. Food Distribution Order 30, which reserves dehydrated vegetables for war needs, has been amended to permit sale of dried carrots and sweet potatotes to civilian users. While the total amount available probably will not be great enough to warrant general distribution through retail channels, institutions such as hospitals, hotels, and restaurants are encouraged to use these two products. Such institutions can well utilize these dehydrated foods to augment their rations of other processed foods.

Later in the year, if supplies of other dehydrated vegetables become available in excess of Government requirements, they may also be released for sale to civilians.

Though sweet potato dehydration plants will not be in operation until fall, institutions are urged to get their orders in to dehydrators as soon as possible to aid in scheduling plant operations.

U. S. AID TO SERVICEMEN'S WIVES REFUSED BY OHIO

Wives of servicemen who require assistance in paying for maternity care expenses must continue to rely on Red Cross, army, navy or air force relief organizations and other agencies of a charitable or semi-charitable nature, it was indicated Thursday, following actior of the state board of health in turning down a federa program offering free medical and hospital care foi births to servicemen's wives. Dr. R. H. Markwith state health director, announced recently that 'Ohic had declined to administer the federal program following an unfavorable report on the proposal by the Ohic State Medical association council.

In adopting the report, the council stipulated that its representatives should confer with officers in charge of army, navy and air force relief agencies and offer assistance in working out a plan to provide adequate care for servicemen's wives. To date, however, no such plan has been announced.

Dr. Markwith said, however, that hospitals and physicians have been taking care of servicemen's wives even when financial arrangements are on the nebulous side. "There have not been and I think there won't be hardships in cases of this nature," the health director asserted.

Medical association council objections to the proposal included:

"It would not provide the wife of an enlisted man with the unrestricted freedom of choice of a physician, nurse or hospital for herself and children. It would establish a medical, nursing and hospital program under control of the federal government. It would establish a mandatory, inelastic maximum fee schedule for professional fees and hospitalization. It would place a third party, namely, a federal agency, virtually in control of medical services and inject a third party into the relationship between physician and patient. It would establish the base for a much larger federally-controlled medical care program to cover all classes of citizens, not only families of men in the armed forces."

The association council suggested an alternate plan under which wives of enlisted men could choose their physician, nurse and hospital, but no mention was made of specific maternity fees.—*Cleveland Despatch,* July 23, 1942.

* * *

Going Up: More Michigan medical men were raised in military rank recently: John G. Slevin (Detroit) was promoted to the full rank of Colonel; C. I. Owen (Detroit) is now Lt. Colonel Owen; Allen W. Byrnes (Richland) is now a Major; First Lieutenants Keith B. Appleby (Kalamázoo) and Wm. E. Nesbitt (Richland) were raised to the grade of Captains. Elmer H. Toftland (East Lansing) also was promoted to Captain.

* * *

Lt. Commander R. R. Kallman, M.C., (formerly of Detroit): "I enjoy reading our JOURNAL and look forward to each succeeding issue." Lt. Comm. Kallman has been in overseas service for many months.

(Continued on Page 588)

THE RISING CURVE OF PEPTIC ULCER IN WAR

"Peptic Ulcer ranks high as a cause of disability for military service. It . . . leads all other digestive diseases as a cause for discharge from the Regular Army."

Kantor, J. L.: Digestive Disease and Military Service, Jnl. A. M. A.; Sept. 26, 1942.

THE increased incidence of peptic ulcer among the armed forces, defense workers and civilians today confronts medicine as a major problem.

Of the various types of therapy used to control this problem none has proved itself more valuable than CREAMALIN, brand of aluminum hydroxide gel.

CREAMALIN, the first aluminum hydroxide gel to be made available to physicians, was also the first to be Council-accepted. CREAMALIN contains approximately 5.5% aluminum hydroxide.



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- **No acid rebound; no danger of alkalosis**
- **Prompt and continuous pain relief in uncomplicated cases**
- **Rapid healing when used with regular ulcer regimen**
- **Mildly astringent; may reduce digestive action, thus favor clot formation**
- **Demulcent; gelatinous consistency affords protective coating to ulcer**

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(Continued from Page 586)

Lt. Commander Frederick P. York, M.C., writes: "We surely enjoy any news from Michigan at this far out-post so please forward the Michigan State Medical Society JOURNAL to me. I am enjoying the service very much, even though it is very remote from Michigan as the crow flies."

* * *

S. A. Fiegel, Lt., M.C., U.S.N.R., writes from across the ocean: "I surely appreciate receiving the MICHIGAN STATE MEDICAL JOURNAL. The last issue I received was the February, 1943, number.

"The health of our 'community' is very good. The physicians staying at home should be given a big hand, for, from what I learn, they are doing a fine job covering their added responsibilities."

* * *

MSMS ROSTER—SUPPLEMENTAL LIST

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BUY WAR BONDS

AND

STAMPS

The JOURNAL
of the Michigan State Medical Society
Issued Monthly Under the Direction of the Council
Volume 42 August, 1943 Number 8

Significance of Unresolved, Organizing or Protracted Pneumonia*

By J. Burns Amberson, M.D.
New York, New York



Ph.B., Lafayette College, 1913; M.D., Johns Hopkins Medical School, 1917. At present, Professor of Medicine, College of Physicians and Surgeons, Columbia University; Visiting Physician in Charge, Tuberculosis Service, Bellevue Hospital; President of the National Tuberculosis Association.

The various clinical pictures of recurrent, unresolved and protracted pneumonia which frequently mask some underlying condition will be discussed. The term atypical pneumonia which is used so much, may be used to label the case which is atypical not so much because of the nature of the infection as of some more important mechanism. Such cases include: bronchiectasis, carcinoma of the bronchus, benign tumors of the bronchus, tuberculosis of the bronchus, foreign bodies, broncho-esophageal fistulæ, oil pneumonia and other conditions. I shall plan to point out how such conditions may be suspected and identified.

■ There are several axioms which may be stated to introduce this subject.

If the patient survives, pneumonia due to the pneumococcus should be expected to resolve in the usual way. If it does not, there is usually a cause in which the pneumococcus as such is not primarily implicated.

Pneumonia which does not resolve goes on to suppuration or organization or both.

The factors responsible for delayed resolution, suppuration and organization can usually be identified.

Therefore it should be the inflexible rule of the clinician never to make a diagnosis of unresolved or organizing pneumonia without searching for the cause; otherwise, patients with serious and remediable lesions of the lungs may miss the opportunity of early diagnosis and cure. I am discussing some of the mechanisms which should occur to the clinician when confronted with a case.

The Infecting Organism

The nature of the infection itself may be sufficient to explain the prolonged course of the pneumonia. Cases due to infection with a virus not infrequently run a course of a number of weeks or even several months. The fever may be intermittent or of a continuous low degree, and constitutional symptoms of malaise, exhaustion and loss of weight may persist, while the local symptoms of cough and expectoration may be only moderate or slight. As time goes on, one may doubt the original diagnosis but the clear history of an acute grippal and febrile onset with general symptoms predominating, a normal leukocyte count, and failure to find pneumococci in the sputum, particularly when other cases in the community or in the family have been known to exist, should satisfy one that it is probably a viral pneumonia running a protracted course. The physical and x-ray findings usually reveal considerable bronchitis together with patches of lobular pneumonia which appear to change slowly and to migrate, new areas appearing while others resolve. There may be more or less pleurisy but there is no necrosis of the parenchyma. Gradually after weeks or months, the lesions resolve and the patient slowly recuperates. If the sputum becomes profuse and purulent, and particularly if necrosis is suspected because of the development of an abscess of the lung or the

*Read at the Seventy-seventh Annual Meeting of the Michigan State Medical Society, at Grand Rapids, September 25, 1942.

finding of elastic tissue in the sputum, one of the pyogenic secondary invaders, usually a streptococcus, is implicated. Leukocytosis then is usually present.

Pneumonia due to *streptococcal infection* may run a prolonged course, and this is occasionally accounted for by the development of an abscess. Then the septic fever may continue, the sputum becomes rather profuse, purulent, nonodorous, and occasionally bloody. An almost pure culture of streptococcus may be grown from the sputum. Here, as in other examples of suppurative disease, physical signs of cavity are usually not made out but x-ray examination of the chest usually reveals the rarefaction, sometimes containing a fluid level. The course may last for several months or even longer until the infection is gradually overcome, the pneumonic exudate is resolved and the cavity slowly shrinks. This may terminate with scar formation or there may be a permanent defect of the parenchyma which shows in the roentgenogram as a thin walled cyst-like defect.

Other organisms may be responsible for unresolved or organizing pneumonia behaving in a very similar fashion, the most common of the other aerobes being the staphylococcus and the Friedlander bacillus. Close observation of the sputum is very important and the quantity and character should be studied each day. Profuse purulent sputum, which in the case of Friedlander infection may be quite viscid, should be smelled daily and if no odor appears, pneumonia, which has become suppurative due to one of these pyogenic organisms, should be suspected. It is always desirable to study a smear made with the gram stain and to make repeated cultures in order to determine the predominating bacteria.

One of the most common causes of protracted and organizing pneumonia is infection of the lung with *spirochaetes* and other anaërobic organisms indigenous to the mouth and upper respiratory tract. Therefore, in the case of protracted pneumonia, the detection of a foul odor from the sputum should immediately give rise to this suspicion. The odor is most easily detected in the freshly produced specimen and may evaporate rapidly. The patient himself may be aware of the fetid odor and taste, or the nurse may have noticed the foulness, particularly when he coughs. This odor need not fill the room and may be only faint, but still very significant. The sputum is always purulent or mucopurulent, but in the early phases it may not settle out in layers as it does later when the expectoration becomes profuse. Bleeding is not usually a feature and, when it does occur, is likely to be mingled with the pus giving it a chocolate color. Pneumonia due to these anærobic organisms is almost always protracted; it becomes suppurative early. The necrosis may lead to the formation of a solitary abscess. Again physical signs may be misleading in that they frequently consist merely of an area of dullness where the breath sounds are diminished in intensity. Signs of consolidation or cavity formation do not usually reveal themselves. Roentgen examination shows a diffuse homogeneous density with rarefied areas or one area containing a fluid level. Usually the lesions are unilateral but occasionally in advanced cases they are bilateral, numerous and lobular pneumonic.

Strange as it seems, the *tubercle bacillus* is not uncommonly found to be the cause of protracted or unresolved pneumonia, originally assumed to be due to the pneumococcus. Tuberculosis of a pneumonic type is a simulator because there may be an abrupt onset of fever, signs of solidification may be discovered and pneumococci may be found in the sputum. Administration of the sulfa drugs is ineffective. Close analysis, guided by a knowledge of the pathogenesis of tuberculosis, usually reveals that the patient had a cough before the acute attack, indicating the probable presence of a cavity from which the infection was disseminated in the lung. The acute episode, while febrile, is not usually ushered in by a severe chill though there may be a pain in the chest. A frank hemorrhage may have occurred at the onset. The sputum is not rusty but mucopurulent, yellowish, or greenish. The patient with tuberculous pneumonia does not have the degree of cyanosis, dyspnea, or prostration which is characteristic of the pneumococcal type. Pneumococci, when present in the sputum, usually are found to belong to one of the higher types indigenous to the upper respiratory tract. Careful and repeated searches reveal tubercle bacilli. Tuberculous pneumonia is not rare in young people, in debilitated elderly people, and in those suffering from such conditions as diabetes and chronic alcoholism. Delay in differential diagnosis may be disastrous.

A much less frequent cause of unresolved and protracted pneumonia in this part of the country is *fungus infection.* The disease is usually insidious at the onset, frequently with evidence of bronchitis, but there may be initial episodes of pneumonic involvement which fails to resolve as expected, but goes on to destructive and organizing lesions. The specific fungus may be difficult to isolate from the sputum. One should not be misled by finding fungi which are saprophytic and not implicated. Fungus infection of the lung is too often diagnosed when the actual facts do not warrant.

Septic Embolism

Septic embolism of the lung should be suspected in protracted migratory pneumonia, especially when a single organism is found to be responsible, such as staphylococcus or streptococcus. The latter may be anaërobic. There may be an obvious source such as osteomyelitis, thrombophlebitis, or puerperal or postabortal pelvic infection. The pulmonary lesions may appear in crops, are of lobular pneumonic character, and may go on to suppuration and abscess formation with the production of purulent sputum in which the organism can be demonstrated if searched for early. This type of pneumonia tends to resolve and heal if secondary invasion of anaërobic organisms from the mouth does not occur. In the interval before healing, the course may be very stormy and multiple abscesses may develop.

Pneumonia Due to Infection or Irritation from Other Extrinsic Sources

A common cause of protracted, suppurative and organizing pneumonia is aspiration of *infectious secretions from the mouth.* It is most common in those who suffer from pyorrhea alveolaris and less frequent in edentulous subjects. The aspiration may occur during sleep, alcoholic intoxication, diabetic coma or hyperglycemia, during epileptic fits, or in other types of unconsciousness. In a high percentage of these patients the pharyngeal and laryngeal reflexes are dulled or absent. Following the acute onset of the pneumonia, the first suspicion of suppuration is indicated by the foulness of the purulent sputum. The case may then run the typical course described above when anærobic organisms are found responsible. In other cases in which anærobes are not implicated, pus containing other pyogenic organisms may have been aspirated into the lung from a *draining paranasal sinus.*

A striking example of unresolved protracted pneumonia is observed in *cases of cardiospasm with esophageal dilatation.* The protective reflexes of the respiratory tract usually become dulled, and the patient frequently regurgitates and aspirates esophageal contents. The protracted and organizing lobular pneumonia is usually bilateral, and eventually there may be extensive pulmonary fibrosis and emphysema from this cause. Fungi may become secondary invaders. The lesions usually are not widely destructive and abscess of the lung appears only in a minority. This is a contrast to the extensive and acute suppuration and destruction, even gangrene, which may occur when the stomach contents containing acid peptic secretions are vomited and aspirated into the lungs.

Aspiration may occur from an esophageal diverticulum or through an esophageo-bronchial fistula.

Oil Aspiration Pneumonia

Oil aspiration pneumonia usually is of an unresolved and chronic organizing character, seldom destructive. It is most common in debilitated infants who have aspirated milk or cod liver oil, and in adults who have been addicted to the prolonged and frequent use of oily nose drops or sprays. It is also seen in chronic invalids, particularly those with neurological disturbances, who depend on mineral oil as a laxative. Clinically the disease runs a mild course which may manifest the symptoms of chronic bronchitis and emphysema. Sometimes oil droplets may be demonstrated in the sputum.

Unresolved or protracted pneumonia confined to a single area of the lung may be secondary to *encapsulated empyema,* a *discharging subphrenic abscess,* or some other adjacent suppurative focus. A typical history of a sudden rupture of encapsulated pus may be obtained, but organizing changes in the lungs occur without this explanation when, for instance, a sacculated empyema gives rise to a so-called pleurogenic fibrosis of the underlying pulmonary parenchyma.

Obviously, in this class of cases, the diagnosis is arrived at by having a familiarity with the possibilities and with the pathogenesis of the various lesions. With this knowledge in mind, a

searching history and careful examination usually leads to a correct diagnosis.

Atypical and Unresolved or Chronic Pneumonia Due to Impairment of Function of the Bronchi

The bronchial tubes are ventilatory conduits but they have an equally important function in draining themselves and the pulmonary parenchyma. Healing of any pulmonary inflammatory lesion depends partly on the structural and functional intactness of the bronchi. Alteration or destruction of the mucosa with its ciliary epithelium or of the deeper structures of the bronchial or bronchiolar wall, especially the myoelastic layer, lead to impairment of drainage and this has an effect on any pneumonic lesion supplied by the damaged tubes. The commonest example is bronchiectasis, a condition in which the failure of normal drainage is largely responsible for the unusual behavior of complicating pneumonia. Frequently there is a history of bronchopneumonias in childhood which presumably caused the original damage. From then on pneumonia may occur frequently, sometimes at long intervals, in the damaged region. There may be a chronic cough, but not infrequently this is slight or even absent, and the bronchiectasis may exist for long periods in the so-called dry state. Pneumonia, when it occurs, may be acute in its onset and at times is attended by a free and copious hemoptysis. Very soon, as the septic febrile course continues, moderate or large amounts of purulent sputum are expectorated, signs of solidification may be elicited, and the roentgen film shows a lobular pneumonic or lobar pneumonic density. Usually no specific predominating pneumococcus is typed from the sputum, and only the common organisms of the upper respiratory tract are cultured. The sputum may be foul from the onset but, frequently enough, never reveals any odor. The failure of resolution in the expected time, the previous history, and the purulence of the sputum suggest the underlying condition, particularly in young people. The basal location of the lesion and the failure to find tubercle bacilli add to this suspicion, although it must be remembered that apical bronchiectasis sometimes exists. Finally, after weeks or months, when resolution has occurred, the persistance of rales in the involved area and of streaky shadows in the roentgenogram is most suggestive. Bronchography with iodized oil then may complete the diagnosis.

Foreign Body

Bronchial drainage may be impaired by a foreign body or by a bronchial ulcer, granulation, fibrotic stricture, or new growth. The interference with drainage is due not merely to the obstruction, which may be only partial, but also to the local swelling or ulceration, possibly accompanied by stiffening of the bronchial wall. All these factors hinder the removal of secretions and exudate from the bronchi and parenchyma distal to the point of involvement, favor stagnation, and thus predispose to infection with the common respiratory organisms, which normally are swept out or destroyed by the physiological defenses. Inevitably such lesions lead to pneumonia in the lung, lobe, or segment of lobe immediately supplied by the involved bronchi. Unless the responsible factor is eliminated very soon, the pneumonia, which at first is usually of a simple lobular type, goes on to suppuration and eventually to organization. In an infant or child in whom there is an unresolved protracted suppurative pneumonia which does not appear to be due to bronchiectasis, foreign body should be suspected. If there is no clear history of foreign body aspiration, the history of a spasmodic cough, sometimes simulating whooping cough, or of an attack of asthma, particularly if the wheezing is on one side of the chest, immediately preceding the febrile attack, should strongly suggest foreign body and the necessity of immediate bronchoscopy. The same may be true of adults, but in elderly people *carcinoma of the bronchus* is much more frequently the seat of the trouble. Most of these patients seek the doctor because of cough, fever, and pain, and frequently because of blood spitting. The unilateral wheeze divulged in the history or elicited in examination, together with the characteristic findings of suppurative pneumonia, namely, dullness confined to the segment of lung supplied by the involved bronchus, diminished breath sounds with few or no rales, all indicate the needs of bronchoscopy for diagnosis. In a majority of these cases bronchoscopy reveals the tumor which is most often carcinomatous but sometimes adenomatous.

In this class of cases, the diagnosis of atelectasis is made much more often than the facts

warrant; as a rule, atelectasis plays no role or only a minor one. Atelectasis alone does not lead to pulmonary suppuration, fever and blood spitting. Atelectasis also bespeaks a temporary functional change which may be corrected by removing the bronchial obstruction. Suppurative pneumonia, on the contrary, is a threat of irreparable damage which frequently necessitates surgical removal of the lobe or lung. Such pneumonia is confused with atelectasis because of the diminution or absence of breath sounds and the homogeneous roentgen opacity with retraction of the diaphragm or mediastinum, the latter being due usually to fibrosis and organizing pleurisy which soon develops.

Atypical and Slowly Resolving Pneumonia Due to Damage of the Pulmonary Parenchyma

Resolution of a pneumonic process depends not only on efficient drainage of the resolved exudate through the bronchi but also upon the efficient circulation of lymph and blood through and about the pneumonic lesions. Furthermore, the healing processes are somewhat dependent on a normally elastic parenchyma which ventilates itself well, such ventilation being necessary for the expulsatory air current or blast which drives foreign material from the alveoli and especially from the bronchioles. The fibrotic and emphysematous lung is obviously lacking in such functional efficiency, and this frequently accounts for delayed resolution of pneumonia. The disease may be typical in onset, and specific pneumococci of a highly virulent type may be demonstrated. The clinical response to chemotherapy may be prompt, but thereafter the lesions may persist unduly, possibly with slowly receding fever and slowly diminishing leukocytosis. Signs of consolidation may continue for a number of weeks. These, together with the absence of the history of previous cough or blood spitting, and the presence of emphysema, may explain the peculiar picture. Prolonged rest in bed usually is accompanied by slow resolution of the lesions. Gradually the consolidation clears while the roentgen shadows take on a most peculiar and deceptive appearance. They assume a patchy, streaky, and sometimes a faintly nodular appearance suggesting tuberculosis or some other chronic organizing or granulomatous condition. In time, however, the lesions clear completely, leaving behind only the picture of the original emphysema.

Summary

The observation of unresolved or protracted pneumonia always indicates the need for a search for the responsible mechanism.

The responsible factors include certain organisms, such as a virus, streptococcus, staphylococcus or Friedlander bacillus.

Tuberculosis often is found to explain the peculiar course; much less often, a fungus.

Anaërobic organisms, indigenous to the mouth and upper respiratory tract, are frequently involved in protracted suppurative pneumonias.

Septic embolism of the lung occasionally is the responsible factor.

Other mechanisms are discussed including alterations in bronchial structure, foreign bodies and neoplasms; also mechanisms causing the aspiration of infectious and irritating substances into the lungs. The role of emphysema in delaying resolution of pneumonia is mentioned.

AGREED! AND WE STILL THINK IT'S A JOB FOR THE AMA

Following is an excerpt from an address made before the recent annual meeting of the Minnesota State Medical Association by Dr. Walter H. Judd, who represents the Fifth Minnesota District in the United States Congress and who should know whereof he speaks:

"I was amazed when I went to Washington to find that there were no headquarters anywhere in Washington where either the Congress or the departments or agencies could get authoritative advice on medical matters. Small wonder that they have made mistakes, and such mistakes are serious. It's the hardest thing in the world to correct a mistake when once it is enacted into law by the Congress and even harder once it has been publicly released as a departmental directive.

"What we medical men must do is to establish a headquarters and provide advice on the spot in Washington, not in the sense of lobbying at all, but with the object of giving counsel. You know most of us in Congress are trying to do right, at least if our own interests aren't too seriously involved. But we need help and the medical profession must provide it."—*Ohio State Med. Jour.*, July, 1943.

Postoperative Gastro-Intestinal Disturbances*

By Charles B. Puestow, M.D.
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B.S., U. of Wisconsin, 1923; M.D., University of Pennsylvania, 1925; intern at U. of Pa. Hospital, two years. First assistant to C. H. Frazier, Professor of Surgery, U. of Pa. Fellow in Surgery, Mayo Foundation, four years. Master of Science in Experimental Surgery, 1931, and Ph.D. in Surgery, 1932, University of Minnesota. Since 1931 member of faculty U. of Illinois College of Medicine, and Surgeon to the Illinois Research and Educational Hospitals. Since 1937, Associate Professor of Surgery, University of Illinois, College of Medicine and Graduate Medicine. At present Lieutenant Colonel Medical Corps, Aus. Writer of numerous medical articles and books.

Disturbances of gastro-intestinal motility comprise some of our most distressing morbidity factors. These consist of nausea, vomiting, distention, and gas pains. These are chiefly the result of altered intestinal peristalsis and are influenced by a variety of factors, among which are: types and depth of anesthesia; mechanical trauma to the gastro-intestinal tract; fluid balance; the nature and time of the initiation of postoperative feeding; and the influence of drugs. Studies have been made on these various factors which we believe shed some light on the causes and methods of prevention of such surgical complications.

■ In recent years great advances have been made in pre-operative preparation and postoperative care of surgical patients. They have been stimulated by the recognition of factors other than disease which contribute to operative mortality and morbidity. Among these factors are: fluid balance; a satisfactory blood picture; and an adequate reserve of such nutritional elements as carbohydrates, proteins, vitamins, and chemicals. The low incidence of surgical complications found in outstanding medical centers is due as much to careful protection of these factors as to meticulous surgical technique.

Disturbance of gastro-intestinal motility constitute one of the most distressing morbidity factors of surgery. Nausea, vomiting, distention, and gas pains often are feared more by patients than are the dangers of the operation itself. These symptoms are the result chiefly of altered intestinal peristalsis which may be influenced by a variety of factors including: types and depths of anesthesia; disturbances of fluid and chemical balance; deficiencies of nutritional factors especially proteins and certain vitamins; trauma to the gastro-intestinal tract by rough handling or surgical procedures; the nature and time of initiation of postoperative feeding; and the influence of certain drugs. These factors will be considered individually.

*Read at the Seventy-seventh Annual Meeting of the Michigan State Medical Society at Grand Rapids, September 25, 1942.

Influence of Anesthesia

Anesthetic agents administered by inhalation undoubtedly may produce nausea and vomiting, possibly by gastric or central irritation. It is unlikely that their influence continues for days after operation to produce distention and gas pains. No single agent has been as unjustly maligned as ether anesthesia. Nearly all postoperative complications including intestinal disturbances, pneumonia, pulmonary atelectasis, circulatory failure, etc., have been attributed to it. However, when similar complications were seen following other forms of anesthesia such as local infiltration, nerve block, and spinal or intravenous infusion, ether was partly vindicated. I do not wish to advocate or condemn any one form of anesthesia. However, I believe that the amount of relaxation produced is far more important in avoiding intestinal disturbances after abdominal surgery than is the agent employed. If anesthesia does not produce relaxation and the surgeon has to "fight" the intestines and handle them roughly, vomiting and distention almost invariably will follow. In a large series of upper abdominal operations performed under deep ether anesthesia with adequate relaxation, vomiting and distention have been rare complications. One of the most important factors in a satisfactory inhalation anesthetic is a free air passage secured by an adequate airway or an intratracheal tube.

Disturbances of Fluid and Chemical Balance

Dehydration has been proven to be responsible for many postoperative dysfunctions and complications. The accumulation of toxic products, because of an inadequate supply of water to remove them, changes in blood viscosity, and difficulty of body temperature regulation may affect intestinal motility as well as other physiologic functions. Chloride loss from unreplaced gastric secretions vomited or aspirated, as well as chloride edema from excessive saline administration, will alter gastro-intestinal peristalsis. The extensive and excellent studies of Coller and his associates have demonstrated the importance of

chemical and fluid balance and are familiar to all of you.

Nutritional Deficiencies

Many postoperative complications which in the past have been difficult to explain, have been proven to be due to deficiencies of certain nutritional substances. Important among these are proteins which are present in inadequate amounts in many patients with debilitating diseases or those illnesses interfering with proper assimilation of food. As a result of protein deficiency tissue edema may occur and wound healing may be delayed. This applies to gastro-intestinal wounds as well as to those of the abdominal wall. Anastomoses made between various portions of the gastro-intestinal tract often do not function satisfactorily as a result of this edema and the associated interference with peristalsis. As it is difficult to administer adequate amounts and types of protein parenterally after operation, it is well to overcome any deficiency before operation if possible.

Inadequate amounts of certain vitamins may contribute to postoperative intestinal disturbances. Deficiency of certain factors in the B complex, particularly B_1, is known to produce gastro-intestinal disorders which may be accentuated by a further depletion of the vitamin in the postoperative period when the patient is receiving little nourishment by mouth. A lack of vitamin C will inhibit wound healing and disturb intestinal motility when surgery has been performed upon the bowel. With our present knowledge of the importance of vitamins and the ease and safety of administering them, there is little excuse for morbidity factors to occur as a result of such deficiencies.

Trauma to the Gastro-intestinal Tract

One of the commonest causes of postoperative vomiting, distention, and gas pains is trauma to the bowel. Where actual operative procedures are performed upon the stomach or intestine injury cannot be avoided. Whenever these structures are incised and sutured, muscular activity of the involved segments ceases or greatly diminishes for several days or longer. If this did not occur, gastro-intestinal surgery would be much more hazardous because peristalsis would tend to produce wound separation and leakage before healing was complete. However, such local paralysis contributes to distention, particularly if fluid and gas are allowed to accumulate above the site of the anastomosis. For this reason, oral feeding should be delayed and gastric or duodenal suction employed until bowel function has been resumed.

Another cause of much postoperative distress and one which can be largely avoided, is rough handling of the intestine during an operation. Pulling the intestine from the abdominal cavity, leaving it exposed, squeezing or compressing it especially with gauze and "fighting it" in general, will cause localized disturbances in motility which may last several days. Factors encouraging such trauma are: poor relaxation due to insufficient anesthesia; too small an incision to permit adequate exposure; inadequate pre-operative preparation, especially decompression of the stomach and bowel, and inadequate sedation; and lack of consideration by the surgeon for the delicate mechanism controlling intestinal motility. Anesthesia sufficiently deep to produce good relaxation will cause far less harm than excessive trauma to the bowel necessitated by rigid abdominal muscles.

Postoperative Feeding

We all recognize the importance of maintaining an adequate food, vitamin, and fluid intake after operation. The simplest and most satisfactory method of doing this is by oral feedings. However, because of the influence of anesthetic agents and of operative trauma, the physiologic functions of the gastro-intestinal tract are disturbed temporarily and early feeding may produce nausea and vomiting. If food does pass into the intestine it is likely to reach segments of bowel which are temporarily paralyzed and distention and gas pains will follow. By so aggravating our digestive system, its return to normal function usually is delayed. Fortunately, we are able to administer an adequate amount of essential nutritional elements parenterally and thus keep the gastro-intestinal tract at rest. Water, salt, glucose and vitamins can be given by vein with little discomfort. Protein in the form of blood or plasma is readily available and with the steady improvement in amino acids, a less costly form of protein is at our disposal. Normal motility of the intestinal tract usually returns in twenty-four to thirty-six hours after abdominal operations not involving the stomach or bowel.

When operations are performed on these structures, oral feedings should be delayed two or three days or longer depending upon the response of the patient. The establishment of a reserve of nutritional elements prior to operation by well planned pre-operative feeding will minimize the dangers of postoperative deficiencies. I believe that too early oral feedings are one of the commonest causes of postoperative intestinal disturbances.

The Influence of Drugs

The pharmacologic action of various drugs used upon surgical patients is a subject of considerable debate. This is due to the great difficulty in carrying out accurate studies in the human on organs which are situated within the abdominal cavity, out of direct vision and whose responses are so markedly altered by anesthesia, operative trauma, and exposure. Many indirect methods of study have been devised which have given valuable information but whose interpretation often is difficult or erroneous.

Animal experimentation lends itself to more accurate information on intestinal physiology for a given species. Segments of bowel may be isolated, exposed, or transplanted, and studied under varying conditions over long periods of time. We have carried out such studies on the dog and obtained consistent results which confirm those of many other observers. However, pharmacologic responses to various drugs administered to dogs have not been identical to those noted in similar studies in man. This might be expected because of the differences in species, intestinal anatomy and food habits.

We have made extensive observations on human patients who, as a result of various surgical procedures, have had portions of the intestinal tract exposed to direct vision. The first of these was a woman whose entire cecum, much of the ascending colon, and several loops of mid bowel could be observed at will. She was carefully studied almost daily for two years and some definite concepts relative to intestinal motility and the action of various drugs upon it were formulated. To be sure that these observations were not peculiar to this individual and to determine if her intestinal motility was normal for man, thirteen other patients were prepared for study. All required surgery in which it was advisable to form an intestinal opening upon the surface of the abdomen. At operation a long proximal segment of bowel was left exposed so that it could be observed. Segments of mid and terminal ileum and all portions of the colon were thus exposed. After all inflammatory reaction had subsided the motility of these segments and their reaction to various drugs were observed repeatedly and over long periods of time. These studies corresponded to those previously noted and led us to believe that the following physiologic and pharmacologic responses of the bowel are normal for man.

An interesting contrary motility was observed in these studies. When the small intestine was vigorously active, the colon was relaxed and quiet. When the colon showed an increase in tonus and motility, the small intestine became atonic and its contractions markedly diminished or ceased. Both large and small bowel often were relatively inactive at the same time but simultaneous vigorous contractions of both were not observed. Likewise, those drugs which activated the small bowel inhibited the colon, while the drugs which produced colon contractions inhibited the motility and tonus of the small bowel. The location of the site at which bowel response changed from stimulation to inhibition was not accurately located but did not appear to be at the ileocecal junction. The reversal in response appeared to be gradual over the lower few inches or foot of ileum.

Morphine has been used almost universally by surgeons for generations. It formerly was believed that this drug "splinted the bowel." However, for many years, physiologists have taught that morphine produces increased intestinal motility. In our studies, morphine invariably increased peristaltic contractions and tonus of the small bowel. It was the strongest small bowel stimulant of all drugs used. However, it definitely inhibited the entire colon. This can account for the constipating effect of the opiates and their action in checking diarrhea.

A number of other drugs including prostigmin, physostigmine, and certain acetylcholine derivatives produced reactions similar to morphine, that is, they increased small bowel motility and inhibited colon contractions.

Contrarily, pituitrin and pitressin produced vigorous contractions of the colon but diminished the tonus and peristaltic action of the small intestine. This response lasted from fifteen min-

utes to an hour but was prolonged when pitressin in oil was used.

Atropine appeared to diminish motility of both large and small bowel although in the usual doses employed by surgeons, its inhibiting action on the small bowel often was only slight and occasional colon contractions were observed after its use. When atropine was combined with morphine small bowel stimulation occurred but was less marked than when morphine alone was used.

Relationship of Drugs to Postoperative Distention

These studies may help to explain the part drugs play in postoperative distention. Mechanical obstruction, peritonitis, or paralytic ileus can produce distention of the small intestine. These are infrequent compared to the incidence of postoperative distention which is confined to the colon. Most surgical patients receive repeated doses of morphine. Although this drug stimulates the small bowel it inhibits colon motility and tonus. Contents pass from the small bowel into the colon where fluid and gas accumulate because of the inactivity of this organ produced by morphine. This fact, however, should not discourage the use of this drug because relief of pain is very important both to the comfort and smooth convalescence of surgical patients. Morphine is most valuable as a pre-anesthetic agent. If the first postoperative dose is administered before the patient develops severe pain, few subsequent doses are needed to keep him comfortable. On the day following operation, codeine may be substituted for morphine quite satisfactorily. This opiate has a much milder inhibiting action on the colon than does morphine. By using opiates judiciously, distention and gas pains will be encountered less frequently. If these symptoms do occur due to lack of colon motility and tonus, this organ may be stimulated by small doses of pitressin.

Distention of the small bowel is best treated by gastric or duodenal suction or by intestinal intubation.

Summary

Postoperative gastro-intestinal disturbances such as nausea, vomiting, distention, and gas pains are due chiefly to dysfunctions of intestinal motility. They may be minimized if factors aggravating them are recognized and avoided as much as possible. Among such factors are: poor relaxation due to inadequate anesthesia; disturbances of fluid and chemical balance; nutritional deficiencies; trauma to the intestine; the time of initiation of oral feeding; the effect of certain drugs.

Each of these factors is discussed.

The author will gladly loan the film presented, if requested from him at Department of Surgery, University of Illinois, 1853 Polk St., Chicago, Illinois.

MSMS

Cancer of the Rectum*

By Fred W. Rankin, M.D.
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Rectal cancer is one of the most frequent lesions of the gastro-intestinal tract and one which can routinely be diagnosed in every case. It is unnecessary to repeat platitudes about the symptomatology and ease of recognition of this lesion, but actually if a simple digital examination and a proctoscopic examination were indulged in when there were symptoms of lower gastro-intestinal tract disease, the diagnosis would be made in every instance and treatment instituted at a much earlier time in the existence of the disease.

For practical purposes one may say that the choice of treatment, except for operative risk, is radical surgery. This, of course, is for adenocarcinomas of the rectum and not for epitheliomas of the anal canal. There is no evidence today to prove that radiation or other methods of destruction by electrical apparatus cures rectal cancer. Radical removal is the hope of these cases.

A series of one-stage combined abdominoperineal resections is reported and the mortality figures and morbidity and survival rates are discussed. The operation is a formidable one which may be consummated by an expert surgeon with reasonable death rates. It is distinctly not an operation for the casual operator.

■ Mr. Chairman and Members of the Michigan State Medical Society—I should like to thank you first of all for your invitation to attend the annual meeting of your society. Secondly, I should like to thank you for allowing me to talk

*Read at the Seventy-seventh Annual Meeting of the Michigan State Medical Society, at Grand Rapids, September 23, 1942.

on a professional subject, for since the first of this year, other duties have compelled me to speak less and less.

On this familiar subject of cancer of the lower alimentary canal and rectum, I am sure that any of the things I shall tell you will be very old to you and my only excuse for constantly repeating the same old story of cancer of the rectum is that it still is a very important subject. If one realizes how often cancers of the rectum occur—about a third of all alimentary canal malignant tumors occur in this particular portion of the body.

In cases of this type, cancer of the colon occurs in 9.5 per cent per hundred thousand cases, whereas cancer of the rectum occurs in 8.3 per cent per hundred thousand cases, and cancer of the small bowel—where cancer occurs so infrequently that it accounts for only about 2 per cent of all gastro-intestinal cancers.

Every one should know and I am sure every one does know the symptoms of cancer of the rectum. On the other hand, many persons do pass up going to a physician with these particular symptoms, not occasionally, but very frequently.

It is common practice in all parts of the country to treat cases of cancer of the recto-sigmoid with these symptoms without a proper examination, and that is the reason I don't feel so badly when I continue to emphasize that bleeding and irregularity of bowel habits are two symptoms occurring in malignant diseases of the lower gastro-intestinal tract which are warning signs, and if they lead us to a complete and careful examination of individuals that are complaining of these symptoms, we will so much more frequently discover these tumors when they are in a condition that we can do something about them.

Anyone knows that practically all cases of cancer of the rectum and cancer of the colon and cancer of the left colon particularly, bleed at some time during their existence. Approximately a third of them have bleeding as a continual symptom and most of them show irregularity of bowel habit early in the disease.

I say "early in the disease." That may not be exactly true, because I don't know what "early in the disease" means, from the standpoint of symptomatology. We might say that a patient has had the symptoms for a short while, and he actually may have had them almost before the first symptom appears. One other thing I would like to mention in regard to symptomatology and that is concerning the examination of those with cancer of the rectum.

An individual comes in complaining of bleeding or irregularity of bowel habit, and if the physician is at all careful or routine, he makes a digital examination, and if that is properly done, it will locate approximately three-quarters of the cancers of the rectum. If the cancer happens to be at the recto-sigmoid, and a great many of them are there—in fact, I think most of them are—many of them cannot be felt. If they are under the perineal fold, they cannot be felt by the examining finger.

Then this should be followed by a proctoscopic examination, and I would like to emphasize that. Every cancer of the rectum is discoverable and diagnosable by a proctoscopic examination, and practically all of them are palpable. If they are situated very high in the recto-sigmoid, the pelvis is such as to limit the palpation in that group of cases.

Now, I would like to emphasize one other thing very particularly. It is a common practice and a very bad one, to send people for an x-ray examination of the lower gastro-intestinal tract before a proctoscopic examination has been made. That is an abominable habit that too many physicians have and it not only delays the diagnosis but frequently obscures the diagnosis, and the actual x-ray examination of a cancer of the rectum is practically useless. It is so frequently inaccurate, and it is so frequently misleading, that if one gets a negative examination, the diagnosis is not only obscured, but a still more dangerous thing happens, and that is if the cancer happens to be situated at the recto-sigmoid juncture beyond the perineal fold, the x-ray examination will often produce an acute intestinal obstruction. It is a very unfortunate habit that a lot of doctors have, and I wish we could emphasize more and more and insist on the proctoscopic examination to make the diagnosis. Make your proctoscopic examination before any gastro-intestinal examination by x-ray is made.

In a group of private cases of my own, the occurrence of cancer of the rectum and recto-sigmoid by age groups was: Below nineteen, there is only one. There are three below thirty. Most of them were between forty and seventy. There were eleven between seventy and eighty, and three between eighty and ninety years of age.

I think there will be no disagreement that cancer of the rectum is entirely a surgical process. I believe there is hardly any disagreement on that, and if there is, I leave it to your observation and judgment that most of the other methods have failed to prove their usefulness in a high percentage of cases. Certainly surgery and radical surgery is the optimum theory to apply to carcinomas of this location. And by the same token, I am sure you will agree with me that those carcinomas of the lower gastro-intestinal tract, unless they have proceeded to the stage of acute obstruction, prior to being operated upon, there should be a preliminary period of rehabilitation and decompression by medical methods, which is possible if one finds that results have not been accomplished by purgatives and enemas, irrigation, by colostomy or whatever one surgical method one chooses. During this period of decompression in which the individual should be hospitalized, he should be rehabilitated by whatever methods are satisfactory with a diet high in calories and blood transfusions if necessary.

While the patient should be hospitalized, I think many times he may be ambulatory, because that keeps his resistance up and his muscular system is kept in better tone if he moves around to the extent of his ability rather than be kept in bed all this time. We have found that if this period is prolonged up to seven days at least, more satisfactory decompression is accomplished and a wider variation in selection of type of operation is permitted.

Here are the routine operations for cancer of the rectum and recto-sigmoid. I put them down, not in the order that I would use them because personally I rarely ever use but two of these, but it is the order in which they are sometimes selected. I believe that the operation in one stage is by all means the modern method of operative procedure in any case in which it is applicable. I believe the two-stage combined abdomino-perineal resection is practically abandoned. I think in the last ten years I have done it five or six times. (Rankin and Jones—that is Daniel Jones of Boston.) I think that has been pretty well abandoned.

I have two other popular or formerly popular types—the abdominal perineal resection, and the surgeons who do that have also abandoned it, when one can't do a Miles operation, which is the operation of choice. That would not give as high or as satisfactory a rate of progress, but it will save a lot of people's lives. It is a good operation and it particularly is good for a lot of elderly people who are bad risks and can't stand prolonged anesthesia, but one can do it under a local anesthetic. Frequently that is a bad surgical principle to do—a colostomy, anesthesia and to do a resection. Those then are the two operative procedures of choice, I think. I have done the segmental resection. I think it is a very bad operation. I think there is no excuse for it.

The operability and the mortality in both the resected cases and the cases in exploration alone or where the decompression was done, is high. The mortality is slowly declining. The group mortality is 12.7 per cent, but another group where 130 or 140 one-stage operations were done shows a mortality of 6.5 per cent. The mortality in the whole group of resected cases was 11.6 per cent, while the mortality in the unresected cases where decompression or exploration alone was done, is high. That is 15.3 per cent.

Here is a group of 316 cases operated on since 1933 up to June of 1940, in which the operation of choice was the one-stage combined A. P. R., 168 cases, eleven deaths, posterior resection fifty-six, with a little bit higher mortality, but a little worse cases and the resistance was a little bit lower. One posterior resection without colostomy, seventy-eight with eight deaths, and an average of 10.2 per cent. Here again we have a higher mortality than with the one-stage procedure. The total mortality is 7.5 per cent. I wanted to make a separate heading for those cases without exploration. You have a cancer with an acute intestinal obstruction. With local anesthesia, there was one death in that series. The other three cases were subject to a colostomy. The resectability was 74 per cent. There were 316 cases and 234 resections. There were 386 operations. Now, the applicability here of the one-stage combined A. P. R. was 71.8 per cent, and in the 234 operations or the 234 resections, 168 of them were done by the Miles type of procedure.

Glands

You recall Miles' classic work. This goes up high into the abdomen along the blood vessels. There is some downward drainage and some lat-

eral drainage, and there is an extramural group of lymphatics.

I think this is one of the illuminating figures on cancer of the rectum, glandular involvement, that we have. That is, David and Gilchrist published those figures four years ago and the point about them is that they examined as high as fifty and sixty glands out of resective specimens and they found that the more glands they examined in a specimen, the more frequently they found involved glands. That is the gist of the whole thing. Gabriel, Dukes and Bussey found the same thing, with a figure of 75 per cent, and Bastianelli 60 per cent. Years ago Broders looked over a group of cases which I resected and found 47 per cent of the glands involved. Later an examination of more glands by another pathologist showed 55 per cent. I think if one examines more and more glands, one finds more and more involvement of glands.

Now, the glandular involvement is the whole story in the prognosis. I am sure of that. Glandular involvement, as this slide shows you, the incidence of glandular involvement, the lower the grade, the less likely the glandular involvement, and it goes up in geometrical progression here. This is Broder's group of glands. You will find practically every one of them shows glandular involvement and glandular involvement is the most important single item in the question of prognosis.

The incidence of glandular involvement is compared to the five-year cure. These are percentages of people that recovered. Without glandular involvement, the prognosis goes up It is 69 per cent with a Grade I, but you only have 16 per cent of the Grade I group without that involvement. Most of your group fortunately falls in Grade I and Grade II. I think 78 per cent of the whole group are those two grades, and that, I think, accounts for the satisfactory prognosis in cancer of the rectum as compared with other types of cancer of the alimentary canal.

The relation of grading to five-year cures shows the progression downwards and in Grade IV, only one out of four lives.

Compare the prognosis in cancer of the rectum and cancer of the stomach. It has been said many times that cancer of the rectum gives one a much more satisfactory prognosis than cancer occurring in the alimentary canal. This is not my statement. This is from a publication of a year ago showing a comparison of one hundred cases of cancer of the rectum. Cancer of the rectum, operated on seventy-five; with cancer of the stomach, operated on fifty; resected, seventy and twenty; survived operation, sixty and seventeen; living three years, fifty-five and six; living five years, fifty and four.

I think it is a very graphic illustration of the comparable prognosis in cancer of the upper alimentary canal and cancer in the lower alimentary canal.

I think that is what I wanted to say about cancer of the rectum. I am sorry to keep repeating many of the same things on this particular subject, but I do so with the hope that the diagnosis may be better accomplished. I do think that we still have a long way to go before people will be properly examined for cancer of the rectum, and I do think that once given a radical operation which has a reasonable mortality that the prognosis such as to warrant considerable optimism from the physicians in this field.

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RADIOLOGY IN HOSPITALS AND INSURANCE PLANS

Doubtless few of those who obtain the services of radiology in hospitals realize that in many institutions the radiologist is working for a small salary and the hospital is deriving a considerable profit from his professional practice. In other institutions what amounts to virtual fee splitting between the hospital and the radiologist is routine technique.

Certainly it is not to the interest of the patient, who must be given first consideration, that the necessity for radiologic study of his case should be made the occasion for providing excess income for the hospital. If the trend is to be controlled, every new arrangement between a hospital and radiologist and every new plan for a prepaid medical service should be carefully scanned by the county medical society in the area concerned to determine whether or not it violates the fundamental tenets that have been so often iterated and reiterated by the House of Delegates of the American Medical Association.

The danger to the sick does not lie in the collection of income for the hospital or the radiologist; it is in the inevitable deterioration that must come in any form of medical service when its practitioners are placed on a basis in which the quality of the service rendered is secondary to the price charged or the method by which the service is supplied.—Editorial, *Jour. AMA,* July 31, 1943.

Clinical Aspects of Arteriosclerosis*

By Roy W. Scott, M.D.

Cleveland, Ohio



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The major medical problem facing the physician is that of human arteriosclerosis which today is killing more people than any other disease and there is every reason to believe that it will be even a more serious problem for the doctor of tomorrow. All the major therapeutic advances of the past generation are prolonging life and yearly adding thousands of recruits to the army of the aged which is destined to succumb to those two affections characteristic of the later decades of life, namely, vascular decay and cancer. The clinical pictures exhibited by patients dealing with vascular disease in three vital beds—heart, brain and kidney—will be presented with some consideration of the problem of hypertension.

■ Long ago it was said: "A man is as old as his arteries." This truth is more apparent today than ever before. Clinical experience and that refined form of it that we call "statistics" point to a steadily mounting incidence of vascular decay, which today is killing more people than any other disease. No wide search is necessary to justify a discussion of human arteriosclerosis, since it is clearly the major medical problem facing the present-day physician, and there is every reason to believe that it will be even a more serious problem for the doctor of tomorrow.

With the conquest of most of the contagious and infectious diseases which cut short the lives of our progenitors, and the more recent sharp fall in the death rate from tuberculosis, the average life span has lengthened from forty-two years in 1850 to over sixty at present. All the major therapeutic advances in the past generation, i.e., insulin for diabetes, liver for pernicious anemia and now the sulfonamide drugs for pneumonia and other infections, are prolonging life and yearly adding thousands of recruits to the army of the aged, which is destined to succumb to those two affections characteristic of the later decades of life, namely, vascular decay and cancer. In America in 1900, one out of every twenty people was sixty years of age or better; in 1930 one out of twelve, and by 1960, statisticians estimate that one out of every six individuals will be sixty years of age or better.

Primarily responsible for the increasing life span is the ancient and honorable guild to which you and I belong, therefore, we of all others should be concerned with the medical and perhaps also with the social implications of our handiwork. How much of our effort comes as a mixed blessing, how near have we come to the creation of a social Frankenstein? Already a few far-sighted economists and sociologists have called attention to the mounting financial burden of the care of the aged and have warned that unless some solution is found it may prove too heavy for our existing social structure. In this connection we are reminded that Medical Science has created a biologic hot-house environment in which an increasing number of the physical, mental and moral unfits may mature to propagate their inferiority. For this we spend billions, while on the other hand, more billions are poured into the making of instruments of destruction to butcher the flower of the stock. May we not ponder the ultimate results of our present-day methods as applied to the human race?

If the solution of the problem of arteriosclerosis appears difficult to the sociologist, it seems even more obscure to the physician. We consult statistics and find that vascular disease is, at the present time, the chief barrier to longevity and the major factor determining individual expectancy. How often we see individuals in the prime of life struck down by vessel disease. It is exacting a formidable toll in our own ranks in the form of coronary thrombosis, hypertensive heart disease, cerebral hemorrhage and thrombosis.

In the face of such facts we strive to explain them, only to find that our ignorance of this most common affection far over-shadows our knowledge. Hypotheses there are in abundance, but these frequently express opposite views concerning the cause and nature of human arteriosclerosis.

Obscure as the etiology of human arteriosclerosis is, clinical experience indicates the important rôle that heredity plays in determining the wearing quality of our arteries.

*Read at the Seventy-seventh Annual Meeting of the Michigan State Medical Society at Grand Rapids, September 24, 1942.

An inherited predisposition to early vascular disease and a familial tendency to essential hypertension in many cases, are well established. As more people are now surviving to the later decades of life than ever before, and as more weaklings are reaching maturity to propagate their inferior stock, one sees little hope either of preventing the disease or of reducing its mounting incidence in the future.

However, from clinical and post mortem observations we do have important information which helps us to appreciate the variety of clinical pictures exhibited by patients dealing with vascular disease. At the post-mortem table we find that arteriosclerosis is most capricious in its distribution, appearing in the greater circulation from the sinus of valsalva to the remote ramifications of the vascular tree, and for some reasons not known at present, the arteries of the lesser circulation, in most cases, are singularly spared. The process may be generalized in some instances and sharply localized in others. The functional significance of arteriosclerosis varies greatly: often there is no parallelism between the extent of the process and the associated functional disturbances.

For instance, we see extensive changes in the larger arteries that offer no barrier to longevity, and on the other hand, the process may be confined to a few millimeters of the coronary artery and cause sudden death in the prime of life. The affection, particularly in young people, may involve the renal vessels and, advancing rapidly, lead to marked hypertension and death in uremia. It is apparent, therefore, that we must be prepared to see a great variety of clinical pictures associated more or less intimately with vascular disease. Thus we see examples of coronary arteriosclerosis with the clinical picture of angina pectoris, or coronary thrombosis, in patients who have never had an elevated blood pressure. Also cerebral arteriosclerosis leading to the clinical picture of senile dementia or hemiplegia occurs in patients who may or may not have had hypertension.

Finally, there is the older patient with chronic hypertension who dies in uremia and the younger patient with so-called malignant hypertension who succumbs rapidly from renal insufficiency.

This brings us to the consideration of a problem which has baffled physicians for decades, namely, the relation between arteriosclerosis, hypertension and kidney disease. Thanks to the work of Goldblatt, one aspect of the problem is elucidated, namely, the relation of hypertension to renal disease. He has shown that constriction of the renal artery of one kidney in both the dog and the monkey causes an elevation in the systolic and diastolic pressures which lasts for weeks or months, whereas, narrowing of both renal arteries at once or after an interval results in persistent hypertension, which has continued in some animals for ten years. The elevated blood pressure following the constriction of one renal artery promptly returns to normal on either removal of the ischemic kidney or release of the clamp on the artery—a crucial experiment illustrating the rôle of the kidney in raising blood pressure. Chronic hypertension is observed in animals that show no evidence of renal excretory insufficiency. This is the experimental counterpart of so-called benign essential hypertension in man. Also the picture of malignant hypertension with uremia, including widespread arteriolar necrosis, can be produced almost at will by further narrowing of the renal arteries. In other words, a dog with benign hypertension lasting for several years may be thrown into the malignant phase with uremic death in a few days; or the acute malignant phase can be produced in the beginning by severe constriction of both main renal arteries. In these experiments is seen the same baffling picture which has puzzled clinicians for the past hundred years, namely, the occurrence of hypertension not only with but without renal excretory insufficiency; yet the elevation of blood pressure in both instances is clearly of renal origin.

Thus the argument that essential hypertension cannot originate from the kidney because there is often no accompanying impairment of renal function is no longer valid.

The failure to find renal arteriolar disease in a few persons with essential hypertension is often cited as evidence that elevated blood pressure has nothing to do with the kidney, but the possibility of severe sclerosis of the main renal arteries sufficient to cause renal ischemia has not been excluded. Until recently such cases have been overlooked and classified as instances of essential hypertension without renal arteriolar disease.

The experimental hypertension in animals without demonstrable evidence of renal excretory insufficiency is the experimental analogue of benign hypertension commonly seen in patients.

Similarly, when the renal arteries of these animals are still further constricted uremia develops with extensive retinal lesions, and post-mortem examination shows arteriolar necrosis like that observed in malignant hypertension in man.

For the production of arteriolar necrotic lesions in the animal two factors are essential: hypertension and progressive renal insufficiency—the same combination that always occurs in the malignant phase of essential hypertension in man.

All the experiments bearing on the pathogenesis of the hypertension induced by renal ischemia, indicate that it is not of reflex nervous origin but of humoral origin. Some chemical substance circulating in the blood and formed as a result of renal ischemia constricts the peripheral arterioles and thus elevates the blood pressure. By the same mechanism, human essential hypertension is best explained. In support of this view is the recent work of Printzmetal and Wilson and of Pickering who have demonstrated that essential hypertension in man is not of vasomotor origin.

Although Goldblatt's work throws no light on the nature of human arteriosclerosis, it goes far in clearing up the problem of hypertension which has baffled clinicians for decades.

It is now possible to understand why patients exhibiting sclerotic changes in the vascular system may or may not have arterial hypertension. If the renal vessels are sufficiently involved in the process, hypertension appears; if they are spared, the patient may show no significant elevation in blood pressure, in spite of arteriosclerosis elsewhere in the body. Furthermore, it now appears that the clinical course pursued in hypertension is determined primarily by the progress of the vascular disease in the kidney. This in the majority of cases is sufficient to cause chronic hypertension, but not rapid enough to impair renal excretory function. Thus most hypertensive patients die of heart failure or of a cerebral accident before uremia develops. However, the renal vascular changes may progress to a point when the clinical picture of so-called malignant hypertension with uremia appears. In other words, the progress and extent of the vascular disease in the kidneys determine whether essential hypertension runs a benign or a malignant course.

As a pathologist, Jean Oliver, in discussing the so-called normal senescence of man, says:

> As a part of the senescent process there develops a generalized sclerosis of the smaller arteries. The vascular changes within the various tissues and organs may be severe but there is no evidence that compels the conclusion that these lesions produce an elevation of blood pressure. If the arterial change within the kidney is sufficient to produce renal ischemia, however, hypertension follows. Depending on the degree of renal arterial involvement, the hypertension may be benign and senility end with mild circulatory difficulties and a beneficent bronchopneumonia; or more grave, cardiac failure or cerebral accident, depending on the local condition of the blood vessels, may terminate in more dramatic fashion life's last episode. By such concept it is not so much vascular senescence, common to all organs and tissues, that determines the ultimate outcome, but a disturbance within the kidney is the final actuating mechanism of senile circulatory failure and accident. A man's arteries may be old, but only if his kidneys are spared does his senescence approach the biological ideal of a gradual and peaceful decline.

Looking back over the past century we see Bright's original postulate regarding the renal origin of hypertension, at first accepted, then questioned and finally in recent years, largely rejected. Now as a result of Goldblatt's epoch-making work, the pendulum swings back, the kidney assumes the major rôle in the etiology of essential hypertension and Bright stands vindicated, although it has taken more than a hundred years to do it.

Accepting the view that human essential hypertension is a symptom of renal vascular disease, the question naturally arises: What causes the sclerotic changes in the kidney vessels? Since these changes differ in no fundamental way from those seen in other arteries, our problem is, in reality, that of human arteriosclerosis. Here we stand on the threshold, three centuries after Harvey, facing in almost complete ignorance the greatest unsolved problem in medicine today. As Albutt once said "We are groping in the dark for something in the dark."

Time does not permit a detailed discussion of the many aspects of vascular disease but to mention some of its more common clinical manifestations is to emphasize the importance of the subject to the practitioner of medicine.

Although as we have seen, patients dealing with the problems of vascular disease may or may not have hypertension, yet, it is well known that an elevated blood pressure, with or without symptoms, is often an early and persistent finding in many cases. Therefore, in the time remaining

I will comment briefly on the management of the patient whose vascular disease is associated with hypertension.

Examination of the Patient With Essential Hypertension

An elevated blood pressure should be regarded as a symptom serving to direct our attention to a careful examination of the patient's entire vascular system with particular attention paid to any subjective evidence pointing to an impaired circulation in three vascular beds: heart, brain and kidneys.

Experience teaches that the symptoms, clinical course and life expectancy of the majority of hypertensive patients are determined by (1) the capacity of the heart to meet the demands thrown upon it, (2) by the wearing qualities of the cerebral arteries, and (3) by the functional capacity of the kidneys. Evidence, therefore, which may throw any light on the state of the vessels in these areas or on the rate at which the sclerotic process is advancing, may be valuable in prognosis and in the sound management of the patient. The discovery of an elevated blood pressure only marks the beginning of an adequate survey of the problem.

The Heart in Essential Hypertension

It is obvious that the heart bears the brunt of the burden in hypertension, and it is therefore not surprising that more hypertensive patients die of cardiac failure than from any other cause. The left ventricle hypertrophies to meet the increasing demands and may continue competent for many years, but sooner or later its reserve becomes exhausted and we have such early symptoms of an over-worked heart as breathlessness on exertion and nocturnal attacks of cardiac asthma. At this stage the heart may be demonstrably enlarged, the left ventricle may be dilated and one may hear an impure first sound or the apical systolic murmur of relative mitral insufficiency. Other valuable signs of a failing left ventricle are a gallop rhythm and a pulsus alternans, the latter often detected by the use of the blood pressure cuff. Over the range of a few millimeters under the systolic pressure only half the beats are heard with the stethoscope. Since well over 50 per cent of hypertensive patients have significant coronary artery sclerosis, we may encounter angina pectoris or coronary thrombosis before any evidence of myocardial failure appears. Aware, therefore, of the load carried by the heart in hypertension, the practitioner is not surprised that it should finally fail. More remarkable indeed is it that the heart is able to carry on as long as it does in many cases.

Cerebral Manifestations of Essential Hypertension

The vast majority of hypertensive patients have, at post mortem, well marked cerebral arteriosclerosis, and, depending on the site and extent of the process, we may have a variety of clinical pictures.

For example, one observes transient attacks of aphasia, paresis or paralysis and other focal brain symptoms which may continue for a few minutes or hours and clear up suddenly and completely. Widespread cerebral arteriosclerosis may lead to atrophy of the brain and the picture of so-called senile dementia. Cerebral thrombosis or hemorrhage may occur and produce the well-known picture of apoplexy and paralysis. It is not unlikely that many of the nervous symptoms observed in some hypertensive patients, for example, headache, vertigo, insomnia, etc., are due to sclerotic changes in the cerebral vessels. The limitations imposed by cerebral vascular disease often spares the heart so that one sees patients recover from an apoplectic stroke and survive for several years, in spite of a well-marked hypertension.

Kidneys in Essential Hypertension

We have pointed out that the smaller renal vessels are involved at necropsy in the vast majority of patients who exhibit essential hypertension during life and we have subscribed to the thesis that hypertension in such cases is a symptom of the renal vascular disease. We recall also that for many decades after Bright, the chief barrier to the view that hypertension was of renal origin was the fact that the vast majority of hypertensive patients never develop renal excretory insufficiency but succumb to heart failure or a cerebral accident. Only about 10 per cent of the cases develop renal insufficiency and die in uremia and the majority of these are young people. It is in this type of case that we most often encounter the so-called malignant type of hypertension in which, for reasons not understood, the renal vascular disease runs a rapid course, the kidney function is soon impaired and death in uremia ensues.

The most reliable clinical evidence that a case of hypertension has progressed to the malignant state with death from uremia imminent, is afforded by the opthalmoscopic examination of the eyegrounds. Here one sees edema of the disc as a characteristic feature of the neuroretinitis, as well as old or recent hemorrhages. Such changes in the eyegrounds may antedate by several weeks or indeed months the appearance of significant renal excretory insufficiency and uremia.

Changes observed in the fundus oculi are common and often of great diagnostic import in all cases of hypertension. Narrowed retinal arteries from vasoconstriction may appear early in essential hypertension and sclerosis of the retinal vessels affords valuable evidence supporting the diagnosis in questionable cases. Many cases of benign hypertension may have some impairment in renal function as indicated by an inability to concentrate urine although they may never progress to the stage of renal insufficiency. It is well to mention here that the appearance of edema in essential hypertension is almost always cardiac and not renal in origin since, as we have seen, heart failure is common, renal failure is rare.

Treatment of Essential Hypertension

We may take it as a self-evident proposition, that the sound management of a sick patient depends on the physician's knowledge of the disease process responsible for the clinical picture he observes. The more accurate information we have regarding such questions as the etiology of the disease, its natural course, its amenability to any form of treatment at present available, the more rational will be the treatment he receives.

Sound therapeutics have ever followed in the wake of advancing knowledge of disease. Our changing conceptions have often caused wide swings of the therapeutic pendulum. For example, it was not so long ago that the physician felt impelled to administer an antipyretic to lower the body temperature in many cases; now we are actually producing fever artificially, secure in the knowledge that the patient dealing with many infections fares better with a natural elevation of temperature than one lowered by drugs. May not the same general principle apply to the treatment of essential hypertension? May not the elevation in systemic blood pressure in essential hypertension be a natural response to guarantee a more nearly normal circulation in such organs as the heart, brain and kidneys? Until such questions can be answered in the negative, they merit serious consideration in any discussion of the therapeutic management of essential hypertension.

Too often our therapeutic efforts are focused entirely on ways and means of lowering the blood pressure, whereas, our zeal in this direction should at least be tempered by the evidence indicating that essential hypertension is but a symptom of renal vascular disease which is, in turn, one manifestation of human arteriosclerosis. Therefore, the therapeutics of essential hypertension is fundamentally that of arteriosclerosis.

Since the rôle of renal ischemia in causing hypertension is now firmly established, every hypertensive patient should be carefully studied, so that instances of unilateral renal disease may be apprehended and cured by operation. Several such cases have been reported in the past two years. The elevated blood pressure promptly returns to normal upon operative removal of the diseased kidney.

Management of the Asymptomatic Patient

It is well known that many hypertensive patients carry on in a normal way for years until they learn of their elevated blood pressure.

How often one sees such individuals running from one physician to another to have their blood pressures taken, and to what avail? Unnecessary restrictions of one kind or another are imposed which do no good and only remind the patient that he must be in a bad way. He may envision a stroke of apoplexy and his emotional reaction to the situation may result in a considerably higher blood pressure. It is well to emphasize therefore, that many cases of essential hypertension not only do not need any treatment but are much better off without it. Generally, the less said about blood pressure in such people the better. Since individuals with essential hypertension deal with a chronic affection, they are easy prey and are often victimized. By following some course of treatment, a cure may be subtly implied if not promised. For such patients sound medical counsel is of vital importance and in managing them, nothing quite takes the place of the homely quality we call "common sense." To institute a sensible regime of living to the end that the patient exercise moderation in all things, is our first consideration. Dietary restriction in overweight

hypertensives is often attended by a drop in blood pressure. An effort should be made to dispel any phobias engendered by previous mismanagement. For example, hypertensive patients are told not to eat meat, particularly in the form of red meat, and many develop a vertible phobia about meat in any form. Rigid protein restriction does no good and may actually cause anemia and general body weakness which often disappears as the patient resumes a normal protein intake. The same may be said of all special dietaries that have been suggested for the management of essential hypertension. Rigid salt restriction, for example, has been advocated, but no sound evidence is at hand to show that hypertensive patients do any better on a salt-poor diet than on one containing sufficient sodium chloride to make food palatable. To enlist the active cooperation of the patient is not always easy, but none the less important. He should be told, in words he can understand, something of the nature of his disease and here one should avoid reference to possible future complications such as heart failure or cerebral accident which may be years in the future. The elevation in blood pressure may be explained as a natural result of the changes in the arteries with advancing years and, possessing no specific remedy to put back the hands of time, we should not promise the patient a cure, but rather impress him with his own responsibility in the case of his problem. His willingness and ability to adjust his life to whatever sensible restriction may seem indicated, may be of vital importance as the years go by. There is little to lose and much to be gained by reassuring the patient, even though we believe that his future is not cheerful. Such questions pertaining to his outlook should be discussed with some responsible member of the family.

Treatment of Hypertensive Patients with Symptoms

Here we deal with a large group of patients with essential hypertension who sooner or later consult us for symptoms other than those arising from a failing heart, a cerebral accident or renal insufficiency.

Headache is perhaps the most frequent symptom encountered although patients frequently complain of tinnitus and dizziness. In the managements of such cases we should be guided by the same general principles outlined above. Faulty habits should be corrected, excesses in all directions avoided and adequate physical and mental rest obtained by the use of sedatives if necessary. Because of the well-known effects of suggestion in many cases, informal psychotherapy may be tried. The diligent administration of a placebo is often effective. The symptomatic improvement following such measures, as well as the spontaneous fluctuation in blood pressure seen in many instances, forces one to be very critical in evaluating the alleged specific effect of the numerous remedies that have been suggested for the treatment of essential hypertension. Among these we may mention dietary restriction of meat and salt, high colonic irrigation, the extraction of teeth and tonsils, abstinence from alcohol, tobacco, tea and coffee, the injection of a variety of endocrines, the excision of part or nearly all of the autonomic nervous system, etc.

Appreciating that the elevated blood pressure is a symptom of a chronic and, so far as we know, incurable disease, and aware of its mounting incidence, we are not surprised that a wide variety of drugs has been used or that none of them have won universal acclaim. Too often conclusions are reached from uncontrolled clinical observations and certain remedies are praised for a short time only to be found valueless upon more careful investigation. Such has been the story of the vast majority of remedies advocated for the treatment of essential hypertension.

Of the drugs employed at the present time for the treatment of essential hypertension, the sedatives are most often effective in controlling nervous symptoms. The relaxation induced by a good night's sleep may also cause a considerable fall in the blood pressure. The bromides, barbituric acid derivatives, such as phenobarbital, and chloral hydrate, singly or in combination, are effective: and in the extremly nervous patient, one may use codeine or even on rare occasions, morphine.

The nitrites, which lower blood pressure by peripheral vasodilatation, have been widely used in patients with essential hypertension. Their action, however, is fleeting and except in individuals with angina pectoris their therapeutic value is limited. Symptomatic relief does not always follow a lowering of the blood pressure; indeed some patients feel worse as their pressure is lowered by nitrites. On the other hand, nitrites may relieve headaches in some hypertensive patients who are subject to periodic elevations of

blood pressure above the level they ordinarily maintain.

The lowering of the blood pressure with amelioration of symptoms has been reported from the use of sulfocyanates in about one third of the cases treated. To avoid the appearance of toxic symptoms such as nausea, vomiting, delirium, exfoliating dermatitis, Barker has suggested a method to control the blood level of the drug. By maintaining this between 6 and 12 milligram per hundred c.c. of serum, the more serious complications are prevented. However, the risk of toxic symptoms precludes the routine use of the sulfocyanates, but when controlled by regular estimation of the blood concentration, they may be given without renal impairment, whose symptoms have proved refractory to all other forms of treatment.

The blood pressure lowered by sulfocyanates returns to its normal level with discontinuance of the drug and whether or not the patient receives any permanent benefit from its use is a matter difficult to decide.

Of the scores of other drugs, including various organ extracts that have been used to lower blood pressure, little need to be said here. The administration of estrogenic substances such as ovarian extract often gives marked symptomatic relief to women in the menopause, but it is difficult to determine whether the fall in blood pressure observed in some cases results from the medication or from the relief of such menopausal symptoms as hot flushes, emotional instability, insomnia and various other nervous symptoms. Venous section is a valuable therapeutic measure in cases of heart failure with cardiac asthma but it is of little value in lowering an elevated blood pressure.

As a result of the work of Goldblatt and his associates which suggested a humoral mechanism of hypertension, much work has been done in an effort to produce a renal extract with hypotensive properties. Although some investigators have reported favorable results in both animals and man from the injection of kidney extracts, there is no indisputable evidence to prove that the fall in blood pressure is the result of a specific substance extracted from kidneys. I have observed a marked drop in blood pressure from the intravenous injection of typhoid vaccine and from the intramuscular injection of boiled milk, while Smith and his associates report significant reduction in blood pressure by intravenous administration of insulin, typhoid vaccine and tyrosinase in hypertensive patients.

Summarizing the management of the patient with essential hypertension we may reiterate, that so far as we know, he deals with the problem of arteriosclerosis and specifically with that of renal arteriosclerosis. Ignorant of the cause and of the factors which influence the progress of the disease, we have no cure and must, therefore, content ourselves to treat symptoms as they appear. We must appreciate that the patient has a chronic and progressive affection and that he will most likely succumb to his vascular disease. The knowledge of these well-established facts supplies the foundation upon which all rational treatment must rest.

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The Toxicology of War Gases*

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■ Since April 22, 1915, when the Germans first employed poison gas as an offensive weapon, gas warfare has been a subject of much discussion and argument. Popular sentiment against the use of gas has been whipped up on the basis that gas warfare is inhuman. This is certainly true, but so is all warfare. Whether or not we agree as to the humane qualities of gas warfare, we must, as medical men, face the fact that for certain purposes it *is* effective and on that basis will probably be employed in this war just as it was in World War I. And as medical men, we must be prepared to provide a defense against poison gases and to treat our casualties as effectively as possible.

It may be well to point out a few facts concerning the effects of gas warfare which are provided by a study of our experiences in 1917-1918. If we consider only the men who received hospital attention (eliminating those who died on the field—largely from gunshot or shell fragment wounds) only 31.5 per cent of all admissions were due to gas as compared with over twice that number due to gunshot. And of the

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deaths of our men in the hospital, 9 per cent were due to gas while 90 per cent were due to gunshot injuries. The mortality among gunshot cases was 8.2 per cent and that from gas was 1.7 per cent as compared with an over-all mortality rate from all military agents of 4.7 per cent. On this basis, it will be seen that although gas does produce a large number of casualties, the mortality rate among gassed cases is remarkably low.

This very fact is one of the reasons why we believe that during this present conflict, gas warfare may be resorted to. From a military point of view, it is more important to produce casualties, than to cause outright fatalities. Any offensive agent used in warfare has as its primary purpose, the weakening of the enemy's striking power and resistance. If an agent causes the outright death of a soldier, it weakens the enemy to the extent of one man. If, on the other hand, we may wound him seriously, so that he requires hospitalization for a considerable period of time we may not only destroy the usefulness of the victim but also tie up the services of many others of the medical and hospital staff, and require that he be given shelter and food, which add another burden to the already over-taxed transportation facilities. Thus, in disrupting the enemy's striking power, a single casualty may be more effective than several fatalities.

In addition to producing casualties, gas warfare has other definite military values. It may be employed to harass and lower the morale of enemy troops and to decrease their efficiency and striking power. Simply by forcing soldiers to put on their gas masks, we greatly impair their effectiveness. You can well imagine how greatly the accuracy of rifle fire is decreased when a man is forced to sight his weapon through the windows of a gas mask. The operation of tanks, anti-aircraft batteries and other fighting equipment become correspondingly difficult during a gas attack. The effect upon morale is also very marked. The constant tension caused by the possibility of a surprise gas attack has a tendency to decrease a soldier's desire to fight. And if, by sudden attack with lachrymators or other irritant gases, we may catch a soldier before he gets his mask properly adjusted, we may disconcert him by causing profuse flow of tears, sneezing or vomiting so that he may be entirely unable to secure the protection of his mask. Such a person is almost certain to become a gas casualty.

Persistent gases which remain in the field in effective concentrations for a period of several days may be employed to render certain strong positions untenable. Thus, by putting large amounts of "mustard" or "Lewisite" into an area, we may make it practically impossible for heavy troop concentrations to occupy that region. Where an area has been literally sprayed with one of these powerful vesicants, gas mask protection is not enough; one also has to have suitable protective clothing before one may venture into such a heavily contaminated region. Protective clothing is not only very uncomfortable and awkward to wear, but is not part of a regular soldier's equipment. Ordinarily it is only special chemical warfare troops who have such protective clothing available.

War gases may be presented to the enemy in a number of ways: (1) They may be blown toward the enemy by favorable breezes in a gas-wave attack. This was the original method of utilizing chlorine gas. (2) They may be fired into enemy territory in the form of gas shells which explode and disperse their contents. (3) They may be presented in the form of gas bombs dropped from planes in a similar fashion. (4) They may be sprayed from low-flying planes.

The relative advantages and disadvantages of these methods of gas attack are obvious. For a "wave" attack, one is completely dependent upon the weather—the caprices of wind direction and wind velocity. Shells and bombs are capable of placing gas exactly where it is needed and in amounts required to be effective. Airplane sprays permit the application of poorly volatile persistent gases in limited areas far behind the battle lines.

Although we cannot foresee just what new chemical warfare offensive agents may be employed in this war, either by our enemies or possibly by our own forces, it seems reasonable to assume that any new war gases will be of the same general types as those employed in 1915-1918. The basic materials from which war gases may be evolved are not unlimited. Hydrocarbons, chlorine and sulphur which constitute the raw materials for gas manufacture are available in almost unlimited quantities. But, other elements such as arsenic, bromine, or iodine are not so plentiful and the manufacture of gases

from such materials must necessarily be limited. Doubtless some new and more effective methods will be found for using gases, which proved ineffective in World War I. Hydrocyanic acid was used by the French in 1916-1917 with little effect, largely because the liquefied gas was loaded into shells with high explosive bursting charges, and shot over at the enemy. When these shells burst, the high explosive dispersed the light gas so thoroughly, that only a very low concentration was attained—a concentration sufficient to stimulate respiration and to produce a headache but not enough to have an appreciably toxic effect. Perhaps in this war, large containers of liquefied hydrocyanic acid may be lobbed over at the enemy or dropped from planes, with just enough of an explosive charge to burst the container. This would blanket the surrounding area with a high concentration of hydrocyanic acid gas which certainly would be much more effective. Because of its ability to penetrate the intact skin, hydrocyanic acid would be very difficult to protect against.

With these general principles of gas warfare in mind, let us examine the various types of agents which we may fairly expect to be employed in this war, the ways in which they act upon the body and the methods of defense which we have available to protect against them. Time will not permit a discussion of all agents so we will limit ourselves to a few characteristic war gases.

The types of gases which may be expected can be classified as persistent and non-persistent agents on the basis of their volatility and ease of diffusion.

Non-persistent Agents.—These are true gases or readily vaporizable or dispersable substances: chlorine, phosgene, chlorpicrin, arsine, hydrocyanic acid, toxic smokes (lachrymators, sternutators, nauseating compounds). They have their primary action on the respiratory tract and upon the eyes.

Persistent Agents are vesicants such as mustard gas and Lewisite. In addition to having a highly toxic effect upon the respiratory organs when their vapors are breathed, these compounds have a violent vesicant action when high concentrations are brought into contact with the skin.

Phosgene: Of the non-persistent toxic agents, the pulmonary irritant, phosgene is probably the most characteristic. It is a colorless gas which may easily be condensed to a liquid by cooling below 8° centigrade. It is three and one-half times as heavy as air so that it has a tendency to hug the ground and diffuses slowly into the upper air. It is not as active chemically as chlorine and it is not so readily absorbed by organic materials such as grass and foliage. It is highly toxic, for as little as one milligram per liter of air may be fatal if breathed for more than a few minutes, and lower concentrations cause severe casualties. Since it is a gas under ordinary atmospheric conditions, it will be quickly blown away by wind. Moisture such as rain or mist, hastens the hydrolysis of phosgene into hydrochloric acid and carbon dioxide, so that in damp weather its effectiveness is decreased. In high concentrations, it is an irritant choking gas while in low concentrations, it has an odor resembling that of mouldy hay.

When high concentrations of phosgene are breathed, the damage to the respiratory system is so intense that the lung abruptly ceases to function and the shock causes circulatory failure also. The bronchial muscles and the blood vessels of the lungs contract and death results in a few minutes. There is no edema fluid in the lungs of such cases. When moderate concentrations of phosgene are breathed, the toxic effect is less violent and more prolonged. There is less irritation and coughing and men often pass through an attack with little or no apparent damage. They may even continue their work for several hours before serious symptoms of the developing pulmonary edema are noted. These are dyspnea and cyanosis passing into a greyish-white stage of collapse followed rapidly by death. Ordinarily, the edema has attained its maximum by the second day following exposure and if death has not occurred by the end of the third day, recovery is likely, barring complications due to broncho-pneumonia. The average length of hospitalization based on over 4,000 English cases of phosgene gassing, was six weeks. The majority of soldiers were permitted to reutrn to duty in from ten to nineteen weeks. Only 0.1 per cent of the surviving cases were finally discharged as unfit for further duty.

Mustard Gas.—Typical of the persistent "gases" is "mustard gas" or dichlordiethyl sulphide introduced by the Germans in July, 1917. This is a liquid having a high boiling point (217° C).

Due to its low volatility, it may remain in a gassed area for over a week if weather conditions are favorable. It has such a high toxicity that the breathing of as little as .006 mg. per liter for an hour will cause serious pulmonary difficulty. On this basis, it is about five times as toxic as phosgene. Because it is toxic in concentrations which cannot be detected by the sense of smell, it has a tendency to break down morale since a man cannot be sure when he is safe without the protection of a gas mask.

High concentrations of mustard gas pass readily through ordinary clothing and produce skin lesions which vary in intensity depending upon the severity of exposure and the sensitiveness of the individual. A sensitive individual may show burns of the skin varying from severe erythema to actual vesicle formation at any area from the lower edge of the gas mask facepiece to the shoe tops. Ordinarily the scalp escapes. The parts which are most readily affected are the inner aspects of the arms and thighs, the axillæ, groin and genitalia. These lesions do not develop fully until twelve to twenty-four hours after exposure.

There is a tremendous range of sensitivity to mustard gas irritation. Some men will show a marked erythema after only fifty seconds exposure of their skin to air saturated with mustard gas, while others require ten minutes exposure to produce the same degree of irritation. In general, persons of fair complexion are most susceptible, while those of highly pigmented skin (especially negroes) are markedly resistant. About 3 to 10 per cent of all individuals will be found to be sensitive while about 20 per cent (of white soldiers) will be found to be markedly refractory to mustard burns.

Local symptoms resulting from exposure to mustard are three in number: (1) conjunctivitis and photophobia. (2) erythema of various skin areas followed later by vesicle formation and ulceration. This is particularly violent where splashes of liquid mustard gas have come into contact with skin or clothing and have not been promptly removed by thorough washing with solvents such as kerosene. (3) irritation and inflammation of nasal passages and the entire upper respiratory tract (if the mask has not been worn). This may progress to the point of degeneration and necrosis of the mucous membrane and may result in bronchitis or pneumonia. If any of the gas has been swallowed, irritation of the gastro-intestinal tract will follow with nausea, vomiting and diarrhea.

General symptoms of absorption of mustard gas are difficult to dissociate from those due to purely local action. They are effects on the nervous system such as listlessness, apathy and depression, as well as disorders of metabolism associated with digestive upset, loss of appetite and loss of weight.

In non-fatal cases of mustard gas exposure, 97 per cent of all men were able to return to duty within a month. (This point was judged by their ability to march a half mile with full equipment) 73 per cent were returnable within twenty-one days and 57 per cent within fourteen days.

Experience with mustard gas indicated the advisability of classifying soldiers as to their sensitivity to vesicants. The 20 per cent showing a marked resistance might very well be placed in organizations where they would be most likely to encounter gas. By so doing, the casualty percentage could undoubtedly be lowered.

Lewisite, an arsenic-containing vesicant, resembles mustard gas in many of its effects. However, the irritant effects are noticeable soon after exposure and the eye lesions are more intense and frequently cause permanent impairment of vision. General absorption of the gas gives rise to systemic poisoning due to its arsenic content. Like "mustard," Lewisite is a high boiling liquid (boiling point = 190°). Because Lewisite is more volatile than mustard gas, it is the more dangerous of the two in cold weather. Since Lewisite has not been employed in a large scale in actual warfare,* we have no satisfactory data concerning its relative value in producing deaths and casualties.

Harassing Agents.—Some chemical warfare agents are employed primarily for their harassing effect rather than for their inherent toxicity. Gases which cause profound lachrymation, sneezing or nausea can be extremely effective in disrupting the morale of enemy troops. If a man may be subjected to such a gas prior to the sounding of the gas alarm and before he can get his mask adjusted, he ceases to be effective as a fighting unit. Obviously a man whose eyes

*There are reports that Lewisite and perhaps other gases have been employed by the Japanese in China. No confirmation of this has been made public although photographs of obviously vesicant effects have been published during the past year.

are closed by lachrymator effect, or one who is sneezing violently from a sternutator gas such as diphenylchlorarsin or one who is seized with a fit of vomiting from the effects of Adamsite (diphenylamine-chlorarsin has his mind fully occupied with his own difficulties and is in no shape to combat an enemy attack.

Some of these harassing agents are true gases but most of them are solids which must be presented in the form of finely powdered dusts or "smokes." To accomplish this fine dispersion, the solid must be mixed with an explosive which will at once heat and pulverize the compound so that it will remain in air suspension. When properly dispersed, such smokes are very difficult to filter out, and only in recent years have our gas masks been improved to the point where satisfactory dust filters have been available. Many of these harassing agents have been utilized in peacetime for controlling riots and dispersing mobs. Tear gases such as chloracetophenon have been particularly valuable to the police and are not only more humane but also more effective than other police methods. The irritant effect upon the eyes soon passes away leaving no serious after-effects. Wide use of arsenic-containing "smokes" in peacetime is to be discouraged, however, due to the danger of systemic arsenical poisoning.

The Mechanism of Action of War Gases

The exact way in which the toxic war gases act upon the human organism is still open to question. It will be noted that practically all of the war gases are chlorine compounds—and that, in general, they produce irritation and edema which may be fairly referable to the formation of hydrochloric acid when they are hydrolyzed in the body.

Chlorine gas itself, is a very corrosive oxidizing agent which is so active that it rarely penetrates to the smaller branches of the bronchial tree. Its corrosive effects are ordinarily spent by the time it reaches the ends of the bronchi or the larger bronchioles. Its action is a surface action.

The more effective war gases are agents which hydrolyze slowly—probably to some extent within the cell itself. Thus, phosgene and mustard gas both hydrolyze so slowly that some of the gas penetrates deep into the tissues and liberates its hydrochloric acid intracellularly. In all probability, it is this acid liberation within the cell which causes the extreme edema of phosgene and the violent vesication and ulceration of mustard gas burns. The products of hydrolysis of war gases are all of a low degree of toxicity so that we may fairly infer that the harmful effect is due to the original molecule rather than to the product of hydrolysis. In fact, in our most toxic agent—mustard gas, any hydrolysis or alteration in structure of the compound is accompanied by a sharp decrease in vesicant and toxic action. The hydrolysis product—dihydroxy-diethyl sulphide is entirely devoid of

$$(ClC_2H_4)_2S + 2H_2O = (HOC_2H_4)_2S + 2HCl$$

Mustard gas	Water	Dihydroxy-diethyl sulphide	Hydrochloric acid

toxic and vesicant action. Likewise, any change in the composition of the molecule causes a decrease in activity. Replacement of the sulfur by oxygen gives rise to dichlor-diethyl ether—a well known and poorly toxic solvent used for de-waxing our winter motor oils. Lengthening the carbon chain or replacing the chlorine by bromine causes a decrease in volatility and thus of toxicity. It is the mustard gas molecule itself which has the proper combination of chemical and physical factors to make such an effective and deadly combat agent.

Treatment of Gas Casualties

The treatment of war gas injuries has not progressed appreciably since the close of World War I and is still largely empirical. Prompt attention and prophylaxis at first aid stations is of primary importance.

1. Get the victim out of the contaminated area and into fresh air—preferably in a warm comfortable room. This should be done with a minimum of exertion on the part of the victim. Care must be taken by the rescue squad so as to avoid contact with gas themselves; otherwise, they also may become casualties.

2. Remove clothing—particularly contaminated clothing. Cleanse exposed or affected areas carefully with a suitable solvent (kerosene, for mustard gas). Wash out eyes with dilute sodium bicarbonate solution.

3. Keep the victim quiet and warm. Permit no exertion. Keep room dimly lighted.

4. In phosgene poisoning, administration of oxygen is of the utmost value in combating anoxemia. Likewise, the blood concentration and the edema may be controlled to some extent by intravenous glucose injection, by venesection or by judicious administration of atropine.

5. Give supportive treatment where cardiocirculatory depression is evident.

6. Prevent subsequent infection of respiratory system or local lesions.

While we hope that gas warfare will not be resorted to in this conflict, we must recognize the possibility that it may be employed and prepare ourselves to meet it, both on the battlefield and on the home front of our essential war industries.

MSMS

Paternal Blood Therapy for Moderate Vomiting of Pregnancy*

By Russell M. Atchison, M.D.
Northville, Michigan

A.B. University of Michigan; M.D., 1935 University of Michigan. Staff member of Mount Carmel Mercy Hospital, Detroit. Member of Wayne County Medical Society, and Michigan State Medical Society.

Injections of two to three centimeters of citrated paternal blood into the gluteal region of the pregnant woman who is suffering from moderate vomiting of pregnancy will invariably cause immediate cessation of symptoms. The frequency of the injection is based on the reoccurence of the complaint. What the cause of the sudden change in the status of the pregnant woman is due to is open to conjecture, but is likely concerned with different blood types or the Rh factor.

■ The result of injection of paternal blood for the vomiting of early pregnancy is astounding in its rapid effectiveness in alleviating all symptoms of morning sickness, nausea, and vomiting. One or two injections are all that apparently is necessary.

The procedure is very simple. Two and one-half centimeters of citrated paternal blood is obtained and injected deep into the gluteal region of the pregnant woman. The number of injections rarely exceeds four. Blood typing can be done and the Rh factor should be determined when the Rh antigen becomes available. Syphilis should be ruled out in both parties.

The number of cases that this therapy has been tried upon is, as yet, not large, the total number being only fifteen patients. However, in no instance has the therapy failed to work where no toxic etiology exists. For example, one patient who fainted in the office due to marked vomiting for seventy-two hours, upon being called the next day after having received paternal blood was found to be entirely free from any aggravating symptoms.

It is very gratifying to learn that within twelve to twenty-four hours a pregnant woman previously unable to retain any food, unable to work in the kitchen, and to enjoy the social life of her family is able to eat, cook, and again find pleasure in living.

What the cause of the sudden change in the status of the pregnant woman is due to is open to conjecture. This is a problem for more technically trained personnel. However, in the small number of patients who have been treated, different blood types have been found to exist between the male and female.

In the rush of increased work that has been thrust upon the physicians left at home to care for the civilian population the alleviation of the vomiting of the pregnant woman would be a great help in allowing more time for other problems. This is the reason for this hurried paper. I hope that the findings of the other interested physicians in Michigan will be the same.

MSMS

If a trigger or snapping finger is not relieved after six weeks of absolute immobilization, the tendon sheath should be opened.

* * *

When the soft corns between the fourth and fifth toes do not respond to conservative treatment, excellent results may be obtained by excision of an underlying exostosis.

* * *

Arthritis of the lower cervical spine may produce signs and symptoms simulating coronary disease.

Eugene W. Secord, M.D., Detroit.

EDITORIAL

SEVENTY-EIGHTH ANNUAL SESSION

■ Michigan's Second Postgraduate Conference on War Medicine, our Seventy-eighth Annual Session, will convene in Detroit, September 20, 21, 22, 23 and 24, 1943. This is the first time since 1940 that the Michigan State Medical Society has met in Detroit. The great majority of our younger active members are in the war service. The older men, of necessity, are again more active in practice and in carrying the burdens of the state, and they still need refresher courses and reviews of the many new developments in medicine and surgery.

The state meeting for seventy-seven years has brought to our members the newest thought and advancements, and the seventy-eighth session will do the same. It is only necessary to scan the program to see that this is a postgraduate course we cannot afford to miss. The few days' absence from our offices and our eternal grind will add to our value, to our patients and to our expectancy of life. Every practitioner owes it to himself, as well as to his patients, to take this relaxation and at the same time to benefit by an unequaled postgraduate course in capsule form, readily assimilible and condensed into three days of lectures and demonstrations.

This is the first meeting in the Hotel Statler, and we are assured of good accommodations and courteous treatment.

Reservations for rooms should be made immediately. Write to the Committee on Hotels, 2020 Olds Tower, Lansing.

WHAT OF THE FUTURE?

■ In the last war 37,000 physicians were commissioned in the armed forces. They were called more or less as needed, and did not produce an acute shortage. Those left at home had plenty of work to do, but the acute scarcity that now exists was not experienced in 1918.

The present governmental philosophy has been one of shortages. Not too long ago crops were plowed under, and little pigs slaughtered to produce scarcity. When war was declared it was only natural for those whose duty it was to supply the armed forces to rush into the market and provide for their anticipated needs. Did that act of efficiency help to produce much of the food shortages and shoe and clothing shortages that we now have?

And while the armed forces were securing their supplies and were making provision for the expected calls of ten to twelve million men, who can blame them for anticipating another very real need? What more natural than that they fill their roster of medical officers? They planned an army of six million men at once, and expected to have one doctor to every 143 men on active duty, so they promptly commissioned 42,000 doctors of medicine. That certainly took care of the immediate needs of the armed forces, but what of the civilian requirements?

While these doctors were being recruited, some by coercion, with the recruiters given orders to "Drain the state dry of doctors of medicine," the Executive Committee of the Council, Michigan State Medical Society, caused a letter to be sent to the Surgeons General of the Army and the Navy, the United States Public Health Service, and Procurement and Assignment Service, inviting attention to the developing shortage, and asking for more sympathetic consideration of civilian needs. The situation became so bad and the recruitments from Michigan so great that the Michigan chairman of the Procurement and Assignment Service issued an order freezing the doctors of medicine in their locations as of December 31, 1942. They are not to be taken into the armed forces, but may relocate in places of need by conference with Procurement and Assignment.

Could the armed forces have secured their doctors and not have created the scarcity? Were mistakes made? Have we not all received letters from medical friends who are in service telling of the gross waste of medical manpower? That occurred in the last war. Until we were in active fighting our medical men were doing routine jobs, which mostly had only a remote connection with the practice of medicine. One fine roentgenologist was milk and eggs purchasing agent for one of our great Base Hospitals until the Meuse-Argonne

drive. That must obtain in developing any army, and especially overseas forces.

But would it not have been feasible to have commissioned our doctors of medicine, returned them to their private practice until two or three months before they would be needed, then have called them in for intensive training and sent them to duty? This would have taken a good amount of thought at the top, but could have been attempted, at least, and would have tapered off the civilian practice to the necessary changes gradually. Can this be done in the next war, or will we have to make the same mistakes and learn all over again?

Or was this a planned shortage—the same as the little pigs and the fields of corn and grain?

Is there a sociologic change to come that we "wot not of"?

President James E. Paullin in his president's address at Chicago in the House of Delegates of the American Medical Association, on June 8, 1943, said:

"The maintenance of an acceptable program of medical education is an essential of the war effort . . . Provision has *not been made* for the education and training of doctors for *civilian practice* . . . Some have urged the creation of a governmental agency to supply medical care for all who require it . . . The Beveridge plan and the report of the National Resources Planning Board indicate that the trend of medical practice inclines toward the establishment of the hospital and the medical center as the sources for distribution of medical care. . . . .

"The present emergency has accentuated the needs for such an arrangement. Even now in areas of great distress the local profession, in coöperation with the United States Public Health Service and other federal agencies, can arrange for the establishment of such facilities for the use of the communities . . .

"Approximately 20 per cent of the facilities of each medical school can be utilized for the training of women and men physically disqualified for military duty and a few deferred by Selective Service. From these civilian and other nongovernmental needs must be met."*

Has the governmental philosophy of created shortages been projected into the practice of medicine? Has a situation been created which will bring us state medicine?

Have you read the Delano Plan?

Was there ever a time when the medical profession needed more active forceful leadership?

President Paullin suggests:

"A Committee of Postwar Medical Planning† of the American Medical Association working in coöperation with similar committees from the American College of Surgeons, the American College of Physicians and other well recognized organizations *should* now begin to formulate plans whereby the facilities of all groups who occupy a vital part in the rendering of medical care can be most efficiently applied. When the war is over there can be offered to the people a carefully designed technic for the medical rehabilitation of a war sick people."

It is to our interest to assure that whatever committees undertake this program and develop this "technique" shall be fully representative of the private practice of medicine to which our military confreres wish to return.

Whether we are the victims of a "planned shortage" or of a situation unavoidable, we are nevertheless faced with a prodigious problem. Where will the replacements for civil practice come from? Doctors will come back from the wars, but slowly and in driblets. To quote Dr. Paullin again:

"The medical profession of this country may be called on after the war to furnish teachers, instructors and practitioners to many countries to aid in the care of those stricken with disease. We must be prepared to meet the demand."

How?

Michigan has never failed to produce leadership when the necessity arose. There are many among us with extraordinary ability and unusual judgment. Let us reason out this problem, and let us submit our ideas and our conclusions. Out of such suggestions and plans will evolve a plan that will be workable.

OBSTETRIC-PEDIATRIC CASES

■ The special Secretary's Letters of June 17 and July 28 to all members are published on page 649. This gives the history and status of the proposed aid to wives and infants of certain enlisted soldiers, sailors, marines and men in the coast guard.

The Executive Committee and the special committees appointed for this study have attempted to preserve for our doctors a semblance of private patient-physician relationship. The Government,

*(Italics ours)

†Such a committee has been authorized by the House of Delegates and appointed by the Trustees as follows: Roger I. Lee, Boston, Chairman Board of Trustees, AMA; Brig. Gen. Fred W. Rankin, Retiring President AMA; Francis G. Blake, New Haven, Conn.; James E. Paullin, President AMA; Harrison H. Shoulders, Speaker, House of Delegates and Dean Yale Medical College; Alan Gregg, Medical Director Rockefeller Foundation; Capt. Wm. J. C. Agnew, USN, and Warren F. Draper, Assistant Surgeon General, United States Public Health Service.

in this instance, has taken from the practice of medicine a sizable slice of work and set a small fixed fee without consulting the doctors. It also demands the filling out of several blanks which would require at least a half hour of clerical work in addition to the searching for special information, much of it confidential, which the doctor has no right to divulge.

The several study committees have made a proposal to the state representatives of the government bureau, by which this service could be rendered and conform to just and ethical standards. Let the government grant this available money as a subsidy to the wife so that she may make her own arrangements for medical and obstetrical care, and let the doctor certify that she is pregnant, and that should suffice.

The department having the administration has failed to coöperate, but has publicly stated that some doctors will sign and will operate under its special control. The Michigan State Medical Society Executive Committee has pledged that doctors will render all needed service for these wives and children, but as *private patients* and on a basis to be worked out by the doctor and his patient. The medical profession never yet has failed to serve in such cases.

Doctors should be and are free and willing to render their professional services, but a government bureau has no right to single out certain services and administer them regardless. One health officer was quoted in the press as saying to those women, "If your doctor won't serve under this plan and sign your blanks, go to someone else. We have a list of several including one osteopath who will operate under the Plan."

Beware the attractive shadow, lest we lose the real substance.

* * *

Postgraduate Credits are given to every member who attends the 1943 Postgraduate Conference on War Medicine, the Annual Session of the Michigan State Medical Society, Wedneday, Thursday, Friday, September 22, 23, 24, at Detroit.

* * *

W. D. Barrett, M.D., David Whitney Bldg., Detroit, is General Chairman of the Detroit Committee on arrangements for the 1943 Postgraduate Conference on War Medicine—the 78th Annual Session of the Michigan State Medical Society.

* * *

Press Relations Committee—C. E. Dutchess, M.D., Detroit, Chairman; M. H. Hoffman, M.D., Detroit; S. W. Insley, M.D., Detroit.

YOU AND YOUR BUSINESS

PROPOSED AMENDMENTS TO CONSTITUTION OF MICHIGAN STATE MEDICAL SOCIETY

The following amendments were presented at the 1942 annual session and according to the Constitution were referred to the 1943 session of the House of Delegates for final consideration:

Constitution

1. Amend *Article III, Section 1,* as follows: "This Society shall consist of active members, honorary members, associate members, retired members, and members emeritus."

Comment.—The 1942 House of Delegates eliminated "junior membership" by deleting Article III, section 3, of the Constitution. This proposed amendment would eliminate the words "junior members" from the list of memberships in the State Society.

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2. Amend *Article VII, Section 1,* as follows: "The Society shall hold an annual session at such time and place and of such duration as the House of Delegates and The Council may determine. This power may be delegated to The Council. Any County Society desiring the annual session shall file an application with the Council sixty days prior to an annual session."

Comment.—This proposed amendment would change the word "meeting" to "session," in line with previous actions of the House of Delegates.

•

3. Amend *Article VII, Section 2,* as follows: "Special meetings of the Society shall be called for general session on the petition of The Council, or by a petition signed by two hundred and fifty members, or upon petition of two-thirds of the delegates seated at the previous regular session. The call" . . . etc.

4. Amend *Article VII, Section 3,* as follows: "Special meetings of the House of Delegates shall be called by the Speaker on the petition signed by two-thirds of the Delegates seated at the last regular session of the House."

Comment.—These proposed amendments (Nos. 3 and 4) would change the word "registered" to "seated," referring to delegates.

VISION

While many of our fellow physicians are serving with the millions in our armed forces fighting to save us and our democratic way of life, let us never forget that at home, today, we must fight to preserve the fundamental principles of medical practice which are based on the free choice of physician and patient, principles we know and believe to be best for the public and for the profession.

We were all too selfishly preoccupied after the last war to think of preventing this present terrible war. Will we be too busy again when this one ends?

The perils and problems of war will surely be fol-

(Continued on Page 641)

Michigan State Medical Society

Past Presidents 1866-1941

1866—*C. M. Stockwell, Port Huron
1867—*J. H. Jerome, Saginaw
1868—*Wm. H. DeCamp, Grand Rapids
1869—*Richard Inglis, Detroit
1870—*I. H. Bartholomew, Lansing
1871—*H. O. Hitchcock, Kalamazoo
1872—*Alonzo B. Palmer, Ann Arbor
1873—*E. W. Jenk, Detroit
1874—*R. C. Kedzie, Lansing
1875—*Wm. Brodie, Detroit
1876—*Abram Sager, Ann Arbor
1877—*Foster Pratt, Kalamazoo
1878—*Ed. Cox, Battle Creek
1879—*George K. Johnson, Grand Rapids
1880—*J. R. Thomas, Bay City
1881—*J. H. Jerome, Saginaw
1882—*Geo. W. Topping, DeWitt
1883—*A. F. Whelan, Hillsdale
1884—*Donald Maclean, Detroit
1885—*E. P. Christian, Wyandotte
1886—*Charles Shepard, Grand Rapids
1887—*T. A. McGraw, Detroit
1888—*S. S. French, Battle Creek
1889—*G. E. Frothingham, Detroit
1890—*L. W. Bliss, Saginaw
1891—*George E. Ranney, Lansing
1892—*Charles J. Lundy (died before taking office)
*Gilbert V. Chamberlain, Flint, Acting President
1893—*Eugene Boise, Grand Rapids
1894—*Henry O. Walker, Detroit
1895—*Victor C. Vaughan, Ann Arbor
1896—*Hugh McColl, Lapeer
1897—*Joseph B. Griswold, Grand Rapids
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1899—*A. W. Alvord, Battle Creek
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1909—*J. H. Carstens, Detroit
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1916— Andrew P. Biddle, Detroit
1917— Andrew P. Biddle, Detroit
1918— Arthur M. Hume, Owosso
1919— Charles H. Baker, Bay City
1920—*Angus McLean, Detroit
1921—*Wm. J. Kay, Lapeer
1922—*W. T. Dodge, Big Rapids
1923—*Guy L. Connor, Detroit
1924—*C. C. Clancy, Port Huron
1925—*Cyrenus G. Darling, Ann Arbor
1926— J. B. Jackson, Kalamazoo
1927— Herbert E. Randall, Flint
1928— Louis J. Hirschman, Detroit
1929— J. D. Brook, Grandville
1930—*Ray C. Stone, Battle Creek
1931—*Carl F. Moll, Flint
1932— J. Milton Robb, Detroit
1933— George LeFevre, Muskegon
1934—*R. R. Smith, Grand Rapids
1935— Grover C. Penberthy, Detroit
1936— Henry E. Perry, Newberry
1937— Henry Cook, Flint
1938— Henry A. Luce, Detroit
1939— Burton R. Corbus, Grand Rapids
1940— Paul R. Urmston, Bay City
1941— Henry R. Carstens, Detroit

*Deceased.

Invitation to a Postgraduate Conference on War Medicine



President's Page

There is little need to exhort the members of the Michigan State Medical Society to consider the value of postgraduate medical education. The interest shown by Michigan physicians in these postgraduate medical activities is something for the physicians of any state to emulate.

On September 22, 23 and 24, a second postgraduate conference on war medicine will be held in Detroit. This is the occasion of the seventy-eighth annual meeting of the Michigan State Medical Society. More than twenty-five nationally recognized leaders in medicine will address the membership. Whether you are a specialist or a general practitioner of medicine, you will receive information valuable both to you and your patients. Papers dealing with general practice, surgery, internal medicine, obstetrics, gynecology, otolaryngology, ophthalmology, dermatology, psychiatry, pediatrics, orthopedics, radiology, pathology and anesthesia will be given. Outstanding men from our military services will attend and present important medical military problems. Section meetings and discussion conferences offer every member an opportunity to introduce questions dealing with medical problems of personal interest. The medical exhibits will demonstrate, as usual, up-to-the-minute advances in medical practice.

Your president extends a most cordial invitation to every member of the Michigan State Medical Society, as well as to physicians from out of the state, to attend this excellent postgraduate conference on war medicine.

W. H. Cummings

President, Michigan State Medical Society

THE 78TH ANNUAL SESSION

1943 POSTGRADUATE CONFERENCE ON WAR MEDICINE

DETROIT



HOWARD H. CUMMINGS, M.D.
Ann Arbor
President



A. S. BRUNK, M.D.
Detroit
Chairman of The Council



P. L. LEDWIDGE, M.D.
Detroit
Speaker of House of Delegates

OFFICIAL CALL

The Michigan State Medical Society will convene in Annual Session in Detroit, Michigan, on September 20-21-22-23-24, 1943. The provisions of the Constitution and By-laws and the Official Program will govern the deliberations.

H. H. CUMMINGS, M.D.
President

A. S. BRUNK, M.D.
Council Chairman

P. L. LEDWIDGE, M.D.
Speaker

G. HOWARD SOUTHWICK, M.D.
Vice Speaker

Attest:

L. FERNALD FOSTER, M.D.
Secretary



L. FERNALD FOSTER, M.D.
Bay City
Secretary



WM. A. HYLAND, M.D.
Grand Rapids
Treasurer



C. R. KEYPORT, M.D.
Grayling
President-elect

PRELIMINARY
PROGRAM of GENERAL ASSEMBLIES

WEDNESDAY MORNING
September 22, 1943

First General Assembly

Ballroom—Statler Hotel, Detroit

A. S. Brunk, M.D., Presiding
L. Fernald Foster, M.D. and Traian Leucutia, M.D., Secretaries

A. M.
9:30 **"The Responsibility of the Medical Profession in Postwar Planning"**

James E. Paullin, M.D., Atlanta, Georgia



James E. Paullin

Professor of Clinical Medicine, Emory University Medical School; President of the American Medical Association; President of the American College of Physicians; member of Committee on Medicine, National Research Council, Washington, D. C.; member of Directing Board of Procurement and Assignment Service, Washington, D. C.

10:00 **"Biliary Tract Disease"**

Frank H. Lahey, M.D., Boston, Mass.



Frank H. Lahey

Director of Surgery, Lahey Clinic, Boston; Chairman of Medical Consulting Board to United States Navy; Chairman of Procurement and Assignment Service for Medical Personnel for the Armed Forces.

The relationship of long-standing gallstones to mortality and morbidity in cholelithiasis will be discussed. The conclusion that unless common duct stones are removed, end-results following cholecystectomy for gallstones will be bad; the incidents of common duct stones in four thousand patients operated upon for gallstones is about one in every five operated upon; that to be on the safe side, two common ducts ought to be opened for every stone found and removed. The causes of recurrent common duct stones and how this complication may be overcome will be presented.

The question of carcinoma of the head of the pancreas and carcinoma of the common bile duct producing painless jaundice will be discussed, as well as diagnosis and differentiation from gallstones and its treatment.

The relationship of cirrhosis to long-standing biliary infection and back pressure will also be discussed.

An experience with ninety-three strictures of the common and hepatic ducts together with the methods of managing them will be discussed and the methods illustrated.

The preparation and the anesthesia for patients operated upon for biliary tract disease, together with the postoperative management, will be taken up.

10:30 **"Avitaminosis in Dermatology and the Value and Limitations of the Sulfa Group in Skin Diseases."**

Oliver S. Ormsby, M.D., Chicago, Illinois



Oliver S. Ormsby

Clinical Professor and Chairman, Department of Dermatology, Rush Medical College.

Avitaminosis is due to inadequate utilization of vital substances contained in food. It is usually due to an unbalanced diet in which food containing the necessary vitamins is not consumed. Avitaminosis may occur, however, when the food supply is adequate due to several factors described in the paper. The chief vitamin deficiency diseases include pellagra, beriberi, scurvy (scorbutus) and rickets. The cutaneous avitaminoses characterized by follicular hyperkeratosis include Darier's disease (keratosis follicularis), pityriasis rubra pilaris and possibly keratosis pilaris, lichen pilaris seu spinulosis (Crocker) and xerosis. A new syndrome due to vitamin A deficiency is characterized by follicular hyperkeratosis, keratomalacia and nyctalopia (night blindness). Vitamin G (B_2) riboflavin deficiency is represented by a syndrome characterized by perleche and dermatitis seborrheic-like lesions together with ocular and oral mucous membrane involvement. The iritis of rosacea is now considered a riboflavin deficiency. Vitamin C (ascorbic acid) deficiency is represented by scurvy.

Pellagra is now considered to be an example of multiple avitaminosis, the chief deficiencies being nicotinic acid, thiamin chloride, riboflavin and vitamin B_6.

The sulfa group of compounds have been used in a large number of dermatoses, both internally and locally. They are of distinct value in erysipelas, erysipeloid, chancroid, lymphogranuloma venereum, hydradenitis suppurativa, lymphangitis pyoderma, gangrenosum and chronic streptococcus ulcers. Dermatitis herpetiformis is well controlled with sulfapyradine. Impetigo and other pyodermic infections respond well to sulfathiazole incorporated in an ointment base. This is also very valuable used in solution or ointment base in the treatment of burns.

You Are Cordially Invited
to Visit the
Michigan State Medical Society

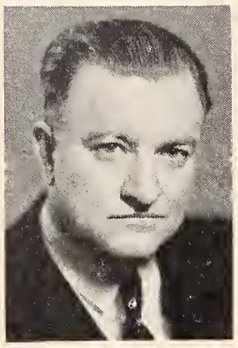
HOSPITALITY BOOTH

Opposite Registration Desk—Statler Hotel

STOP AND CHAT WITH YOUR STATE SOCIETY OFFICERS

11:00 "Deformities of the Pyloric Antrum Due to Perigastric Adhesions and Bands Simulating Intrinsic Gastric Lesions"

E. L. JENKINSON, M.D., Chicago, Illinois



E. L. JENKINSON

Associate Professor of Radiology, Northwestern University; Director of Department of Radiology at St. Luke's and Ravenswood Hospitals.

Lesions of the pyloric antrum have always interested the internist, surgeon, and roentgenologist, and only through close coöperation is it possible to identify early lesions of the antrum. This is a report of the rentgenologic findings in five cases in which perigastric adhesions caused gastric deformities closely resembling intragastric malignancy.

The patients were all carefully checked fluoroscopically on several occasions. Antispasmodics failed to influence the deformity. All of the patients herein reported were subject to surgery.

Evidence is presented showing the fallibility of x-ray diagnosis in lesions of the pyloric antrum and the need for a diagnostic laparotomy in the early differential diagnosis.

11:30 End of First General Assembly
Half-hour Intermission to View Exhibits

PUBLIC MEETINGS

Two evening meetings will be open to the public:

1. **President's Night,** Wednesday, September 22, will be highlighted by:
   8:00 p.m. President's Address (H. H. Cummings, M.D.)
   Induction of President-elect (Claud R. Keyport, M.D.)
   9:00 p.m. Biddle Oration (Edward A. Schumann, M.D.)
2. **Sister Elizabeth Kenny Lecture,** Friday, September 24, 8:30 p.m.

Invite your patients and other friends to attend these interesting meetings. No admission fee.

PAPERS WILL BEGIN AND END ON TIME!

Believing there is nothing which makes a scientific meeting more attractive than by-the-clock promptness and regularity, all meetings will open exactly on time, all speakers will be required to begin their papers exactly on time, and to close exactly on time, in accordance with the schedule in the program. All who attend the meeting, therefore, are requested to assist in attaining this end by noting the schedule carefully and being in attendance accordingly. Any member who arrives five minutes late to hear any particular paper will miss exactly five minutes of that paper!

PROGRAM of SECTIONS

Wednesday

September 22, 12:00 to 1:30 p.m. (luncheons)

SECTION ON DERMATOLOGY AND SYPHILOLOGY

Judge Woodward Room

Chairman: CLAUD BEHN, M.D., Detroit
Secretary: LT. COMM. FRANK STILES, M.C., USNR

"Dermatological Conditions," Illustrated by Kodachromes (30 min.)

OLIVER S. ORMSBY, M.D., Chicago, Illinois

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SECTION ON RADIOLOGY, PATHOLOGY, AND ANESTHESIA*

Michigan Room

Chairman: TRAIAN LEUCUTIA, M.D., Detroit
Secretary: HAZEL PRENTICE, M.D., Kalamazoo
Secretary: H. J. VANBELOIS, M.D., Grand Rapids

(a) **"Erythroblastosis"** (10 min.)
DONALD C. BEAVER, M.D., Detroit

(b) **"Important Contributions of X-Rays to War Industry"** (10 min.)
KENNETH E. CORRIGAN, Ph.D., Detroit

(c) **"Acute Peptic Esophagitis"** (15 min.)
PAUL R. CANNON, M.D., Chicago

(d) **"Radiation Sickness: Its Cause and Treatment** (15 min.)
E. L. JENKINSON, M.D. and
W. H. BROWN, M.D., Chicago

**The anesthetists will hold a separate meeting Thursday noon, September 23, 1943.* *See Program on page 633.*

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SECTION ON GENERAL PRACTICE

English Room

Chairman: H. B. ZEMMER, M.D., Lapeer
Secretary: NINA WILKERSON, M.D., Sturgis

"Common Errors in the Treatment of Indigestion" (30 min.)

JAMES E. PAULLIN, M.D., Atlanta, Georgia

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P. M.
1:30 Half-hour Intermission to View Exhibits

PROGRAM of GENERAL ASSEMBLIES

WEDNESDAY AFTERNOON

September 22, 1943

Second General Assembly

Ballroom—Statler Hotel, Detroit

DEAN W. MYERS, M.D., Presiding
L. FERNALD FOSTER, M.D., and RUSSELL DEALVAREZ, M.D., Secretaries

P. M.

2:00 "Protein Metabolism and Resistance to Infection"

PAUL R. CANNON, M.D., Chicago, Illinois



PAUL R. CANNON

Professor of Pathology and Chairman of the Department, The University of Chicago.

The relationship between undernutrition associated particularly with protein deficiency and increased susceptibility to infectious disease will be discussed. Evidence will be presented showing that hypoproteinemia is frequently associated with intercurrent infections. Discussion will be directed at the problem of the relationship of protein intake to the building up of the protein reserves and to the acquisition of immunity, the fabrication of antibodies and their role in preventing or resisting the development of intercurrent infections.

2:30 "Post-partum Sterilization an Indefensidle Procedure"

EDWARD A. SCHUMANN, M.D., Philadelphia, Pennsylvania



EDW. A. SCHUMANN

3:00 "Causes and Treatment of Edema in Childhood"

IRVINE MCQUARRIE, M.D., Minneapolis, Minnesota



IRVINE MCQUARRIE

Ph.D. University of California, 1918; M.D., Johns Hopkins, 1921; Professor and Head of Department of Pediatrics, University of Minnesota; Chief Pediatrician University of Minnesota Hospitals.

The various physiological and pathological mechanisms of edema formation are discussed briefly. The role of protein dietary deficiency and inability of the body to fabricate serum proteins are stressed. Recent advances in our knowledge concerning the etiology and treatment of nephrotic, nephritic and cardiac edema in children are likewise reviewed. Because of widespread partial starvation, the incidence of edema among children in war-torn and occupied countries is extremely great. The important relationship of this state to the general health of the child population is given special attention.

3:30 Half-hour Intermission to View Exhibits

4:00 DISCUSSION CONFERENCES WITH GUEST ESSAYISTS

5:00 End of Second General Assembly

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MSMS Hospitality Booth—At the 1943 Annual Session, the Michigan State Medical Society Headquarters will be in the "Hospitality Booth" next to the Registration Desk in the Statler Hotel, Detroit. MSMS Councilors and Officers will be in attendance at all times.

Members are invited to stop at the Hospitality Booth and meet the President, the President-elect, the Council Chairman and other MSMS officers.

SIXTEEN DISCUSSION CONFERENCES

These quiz periods will be held Wednesday, Thursday, and Friday, September 22, 23, 24, at 4:00 to 5:00 p.m. An opportunity to ask questions concerning the presentations of the guest essaysists, or to discuss one of your interesting cases with them, will be provided.

Wednesday: Discussion Conference will be held on General Practice, Surgery, Dermatology, Radiology-Pathology, Obstetrics, Pediatrics.

Thursday: Discussion Conferences on Otolaryngology, Surgery, Medicine, Gynecology, Pediatrics.

Friday: Discussion Conferences will be presented on Medicine, Ophthalmology, Dermatology, Obstetrics, and General Practice.

Please submit your questions, on forms printed in the Program, to the Secretary of the General Assembly immediately after the termination of the lecture, in order that the guest essayist may have time to consider same before the quiz period at 4:00 p.m.

WEDNESDAY EVENING
September 22, 1943

Third General Assembly

Ballroom—Statler Hotel, Detroit

H. H. Cummings, M.D., Presiding
L. Fernald Foster, M.D., Secretary

P. M.

8:30 **PRESIDENTS NIGHT—PUBLIC MEETING**

1. **Call to order by President H. H. Cummings, M.D., Ann Arbor**
2. **Announcements and Reports of the House of Delegates, by Secretary L. Fernald Foster, M.D., Bay City.**
3. **President's annual address—H. H. Cummings, M.D.**
4. **Induction of Claude R. Keyport, M.D., Grayling, into office as President of the Michigan State Medical Society. Response.**
5. **Presentation of Scroll and Past President's Key to Dr. Cummings by the Chairman of The Council, A. S. Brunk, M.D.**
6. **Introduction of the President-Elect and other newly elected officers of the State Society.**

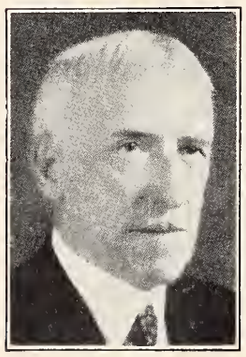
9:00 **7. The Andrew P. Biddle Oration "Medical Education and Present-day Philosophies of Government"**

Edward A. Schumann, M.D., Philadelphia, Pennsylvania



Edw. A. Schumann

8. Presentation of Biddle Oration Scroll



Andrew P. Biddle

Patron of Postgraduate Medical Education.

End of Third General Assembly

THURSDAY MORNING
September 23, 1943

Fourth General Assembly

Ballroom—Statler Hotel, Detroit

C. R. Keyport, M.D., Presiding
L. Fernald Foster, M.D., and Wm. S. Jones, M.D., Secretaries

A. M.

9:30 **"Treatment of Open Fractures"**

Kellogg Speed, M.D., Chicago, Illinois



Kellogg Speed

Professor of Surgery (Rush), University of Illinois Medical College.

Defining open fracture as one communicating with the air from whatever cause or route the treatment is outlined as follows: The patient himself, the conditions under which he is found, his state of shock as from hemorrhage, the various methods of combatting blood loss; the condition of the wound at the time of first aid, means and methods of splinting and fixation and preparation for transportation.

When definitive treatment is possible in hospital or suitable surroundings an assay of the wound and fracture before débridement is required, the period of contamination is mentioned and the operation described. Internal fixation and types of splinting and their use, are outlined, including the Stader splint. The use and dangers of sulfa drugs and antitetanic serum are covered and other antiseptics are mentioned.

10:00 **"Certain Observations on Headache of Intranasal Origin"**

H. I. Lillie, M.D., Rochester, Minnesota



H. I. Lillie

Chief of Section on Otolaryngology and Rhinology, Mayo Clinic; Professor of Otolaryngology and Rhinology, Mayo Foundation, University of Minnesota.

Headache should be looked upon as a symptom and not as a disease. The headaches caused by certain intranasal conditions will be discussed from the personal clinical experience of the speaker. Such headaches group themselves into rather definite patterns and should be readily recognized. Lantern slides of schematic drawings will, it is hoped, demonstrate the

site and character of the conditions within the nose commonly encountered as causative factors in producing headache. Appropriate treatment is effective in relieving the distress.

10:30 "Wartime Obstetrics"

E. D. Plass, M.D., Iowa City, Iowa



E. D. Plass

Professor and Head of Department of Obstetrics and Gynecology, State University of Iowa.

Personnel deficiencies are dictating many attempts to reduce the professional care of obstetric patients to the essentials consistent with safety for mother and baby. Luxury items must be eliminated, for time must be saved.

An attempt will be made to evaluate prewar ideas of adequate obstetric care and treatment in terms of their essentiality—what must be retained? what can be eliminated? how can available professional skills be spread thinner without undue additional risk? how do newer techniques fit into the theme of simplification?

11:00 Subject to be announced.

Col. L. G. Rowntree, M.C., A.U.S., Washington, D. C.

11:30 End of Fourth General Assembly
Half-hour Intermission to View Exhibits

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SEVEN GENERAL ASSEMBLIES

Wednesday, Thursday, Friday, September 22, 23, 24

Ten Sectional Meetings will be held during the Michigan State Medical Society Conference on War Medicine. All the Sections will meet at luncheons in the Statler Hotel, Detroit, as follows:

Wednesday, September 22, 12:00 noon to 1:30 p.m. (luncheons)

1. Dermatology and Syphilology—Judge Woodward Room (See page 630)
2. Radiology and Pathology—Michigan Room (See page 630)
3. General Practice—English Room

Thursday, September 23, 12:00 noon to 1:30 p.m. (luncheons)

4. Surgery—Ballroom (See page 633)
5. Gynecology and Obstetrics—Michigan Room (See page 633)
6. Otolaryngology—Judge Woodward Room (See page 633)
7. Anesthesia—Parlor F (See page 633)

Friday, September 24, 12:00 noon to 1:30 p.m. (luncheons)

8. Medicine—Ballroom (See page 635)
9. Pediatrics—English Room (See page 635)
10. Ophthalmology—Parlor F (See page 635)

— PROGRAM of SECTIONS —

Thursday

September 23, 1943, 12:00 to 1:30 p.m. (luncheons)

SECTION ON SURGERY

Ballroom

Chairman: R. H. Denham, M.D., Grand Rapids
Secretary: R. H. Baker, M.D., Pontiac

(a) **"Experiences with the Use of Penicillin"** (20 min.)
Col. R. H. Kennedy, M.C., A.U.S.
Percy Jones General Hospital, Battle Creek

(b) **Injuries of the Carpal Bones**—Lantern Slide Demonstration. (20 min.)
Kellogg Speed, M.D., Chicago, Illinois

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SECTION ON GYNECOLOGY AND OBSTETRICS

Michigan Room

Chairman: Roger S. Siddall, M.D., Detroit

Secretary: Russell deAlverez, M.D., Ann Arbor

"Intrapartum Fever" (30 min.)
E. D. Plass, M.D., Iowa City, Iowa

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SECTION ON OPHTHALMOLOGY AND OTOLARYNGOLOGY

Judge Woodward Room

Chairman: Wm. S. Jones, *M.D., Menominee*
Vice Chairman: E. P. Wilbur, M.D., Kalamazoo
Secretary: J. J. McDermott, M.D., St. Joseph
Vice Secretary: J. Lewis Dill, M.D., Detroit

OTOLARYNGOLOGICAL PROGRAM

"The Significance of the Clinical History in Otorhinolaryngology" (30 min.)
H. I. Lillie, M.D., Rochester, Minn.

The clinical history may be of greater relative significance than the clinical or laboratory findings in arriving at a correct diagnosis is the opinion of the speaker. There seems to be a great tendency to neglect the relevant clinical history in otolaryngology. Certain significant facts pertaining to the history in certain clinical syndromes as applied to otolaryngology will be discussed informally.

* * *

SECTION ON RADIOLOGY, PATHOLOGY, AND ANESTHESIA

Parlor F

ANESTHETISTS' MEETING

Discussion Conference on "An Evaluation of the Clinical Application of the Methods of Continuous Spinal and Continuous Caudal Anesthesia"

Discussion Leader: Lt. Edw. B. Touhy, M.C., A.U.S., Chief of Anesthesia and Operative Section, Percy Jones General Hospital, Battle Creek

* * *

P. M.
1:30 Half-hour Intermission to View Exhibits

PROGRAM of
—— GENERAL ASSEMBLIES ——

THURSDAY AFTERNOON
September 23, 1943

Fifth General Assembly

Ballroom—Statler Hotel, Detroit

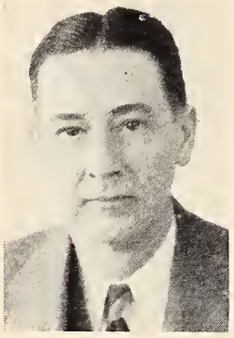
O. D. STRYKER, M.D., Presiding

L. FERNALD FOSTER, M.D., and R. H. DENHAM, M.D., Secretaries

P. M.

2:00 **"The Challenge of Postwar Pediatrics"**

A. ASHLEY WEECH, M.D., Cincinnati, Ohio



A. ASHLEY WEECH

Director, The Children's Hospital Research Foundation; Professor of Pediatrics University of Cincinnati College of Medicine.

The world is in a state of diabolically-inspired chaos, but out of its lessons are being learned which can be utilized in future years to provide increased health and happiness and in some measure repay those who are bearing the brunt of the present debacle. No one is interested in trying to promote another war, but it is fair to ask whether by preventive medicine we can rear another generation of young men who are more physically fit than those of the present. Much of this work will involve coöperation from all branches of medicine as well as statesmanlike guidance from those who are not Doctors of Medicine. Nevertheless, there will be much to occupy the mind of the physician who is interested in preventive pediatrics: for example (a) possibilities of preventing dental caries; (b) prevention of heart disease; (c) means of improving the psychogenic background in the home with a view of producing stable citizens less subject to the shellshocks of peacetime.

2:30 **"Methods of Personality Study in Relation to Medical Problems"**

J. C. WHITEHORN, M.D., Baltimore, Maryland



J. C. WHITEHORN

Henry Phipps Professor of Psychiatry and Director of the Department of Psychiatry of the Johns Hopkins University, and Psychiatrist-in-Chief of the Johns Hopkins Hospital.

Personality, as the organized system of attitudes through which one handles interpersonal relationships —well, poorly or perniciously—may greatly affect the organ systems through chronic and repetitive anxiety states and conditioned reactions. How may one recognize and characterize the personality trends disruptive of bodily health, in a manner useful in treatment? Discussion of the attitude examination and the use of the interview, social history and special techniques and tests in evaluating personality trends and their modifiability.

3:00 **"War Casualties in a General Hospital in the U.S.A."**

COL. R. H. KENNEDY, M.C., A.U.S., Battle Creek, Mich.

3:30 **Half-hour Intermission to View Exhibits**

4:00 **Discussion Conferences with Guest Essayists**

5:00 **End of Fifth General Assembly**

FRIDAY MORNING
September 24, 1943

Sixth General Assembly

Ballroom—Statler Hotel, Detroit

R. S. MORRISH, M.D., Presiding

L. FERNALD FOSTER, M.D., and CLAUD W. BEHN, M.D., Secretaries

A. M.

9:30 **"The Viral Pneumonias"**

HOBART REIMANN, M.D., Philadelphia, Pennsylvania

Professor of Medicine, Jefferson Medical College.

During the past five years a form of pneumonia previously unrecognized has been found to be widespread. Because of certain peculiar characteristics of the disease, a filterable virus is supposedly the cause and a number of "new" viruses associated with pneumonias have been isolated. In the majority of cases, however, the cause is still unknown.

The clinical characteristics of the disease as contrasted with the better known forms of pneumonia, its epidemiology and its treatment will be discussed. Diagnosis is of especial importance since the sulfonamide compounds are useless in therapy and mortality rate is nil.

THE 60 EXHIBITS WILL REMAIN OPEN FOR YOUR INSPECTION UNTIL 6 P.M. ON WEDNESDAY AND THURSDAY, SEPTEMBER 22-23; UNTIL 2 P.M. ON FRIDAY, SEPTEMBER 24.

10:00 "Psychiatric Aspects of the Warring Nations"

WM. S. SADLER, M.D., Chicago, Illinois



Director, Chicago Institute of Research and Diagnosis, Formerly Professor, Post-Graduate Medical School of Chicago.

WM. S. SADLER

Nations are but aggregations of individuals. Individuals are subject to certain psychopathological disorders—certain emotional disturbances and personality distortions. Would it seem strange that national aggregations of individuals or racial assemblies of distorted individuals would likewise exhibit these same abnormal tendencies in their social, political, and international behavior?

This discussion is a serious attempt to apply certain psychiatric conclusions as concern individuals, to the present-day warring nations, more particularly the German and Japanese people.

In dealing with either the individual or the nation, accurate diagnosis is the one thing essential to successful treatment. This study is an attempt to make a diagnosis from the psychiatric standpoint, of Germany and Japan as our chief enemies in the present global struggle.

10:30 "Preventable Blindness"

PETER C. KRONFELD, M.D., Chicago, Illinois



Assistant Professor of Ophthalmology, Northwestern University; Dean of Instruction, The Illinois Eye and Ear Infirmary.

PETER C. KRONFELD

11:00 "Dermatitis of War Industries in General Practice"

HARRY R. FOERSTER, M.D., Milwaukee, Wisconsin



Assistant Professor of Dermatology, University of Wisconsin and Marquette University.

H. R. FOERSTER

The accelerated program of industries engaged in production for war has resulted in an increase of dermatitis of various types among employes. This has created some new problems and accentuated old problems in diagnosis, treatment, and management. Some of these problems will be discussed as they concern the physician in general practice.

11:30 End of Sixth General Assembly
Half-hour Intermission to View Exhibits

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—— PROGRAM of SECTIONS ——

Friday

September 24, 1943, 12:00 to 1:30 p.m. (luncheons)

SECTION ON GENERAL MEDICINE

Ballroom

Chairman: H. M. POLLARD, M.D., Ann Arbor

Secretary: C. J. SMYTH, M.D., Eloise

(a) **"Malaria—A Potential Current and Post-war Medical Problem"** (20) min.)

L. T. COGGESHALL, M.D., Ann Arbor

(b) **"Problem of the Mild Psychoneurotic in the Army"** (20 min.)

COL. WALTER B. MARTIN, M.C., and LT. COL. PAUL A. PETREE, M.C., Percy Jones General Hospital, Battle Creek, Michigan

(c) **"Recent Advances in Therapeutics"** (20 min.)

GORDON B. MYERS, M.D., Detroit

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SECTION ON PEDIATRICS

English Room

Chairman: CHAS. F. McKHANN, M.D., Ann Arbor

Secretary: MARK OSTERLIN, M.D., Traverse City

"Peculiarities in the Physiology of Newborn Patients" (30 min.)

CLEMENT A. SMITH, M.D., Detroit

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SECTION ON OPHTHALMOLOGY AND OTOLARYNGOLOGY

Parlor F

Ophthalmological Program

"Indications for Cyclodialysis" (30 min.)

PETER C. KRONFELD, M.D., Chicago, Illinois

P. M.
1:30 Half-hour Intermission to View Exhibits

FRIDAY AFTERNOON

September 24, 1943

Seventh General Assembly

Ballroom—Statler Hotel, Detroit

T. E. DeGurse, M.D., Presiding

L. Fernald Foster, M.D., and Chas. F. McKhann, M.D., Secretaries

P. M.

2:00 "Small Unrecognized Strokes, a Common Cause of Illness in Older Persons."

Walter C. Alvarez, M.D., Rochester, Minn.



Professor of Medicine, University of Minnesota (Mayo Foundation). Editor of Gastro-enterology.

Walter C. Alvarez

The gastro-enterologist sees many persons past forty complaining of abdominal pain or distress, indigestion, perhaps a sudden large loss in weight, perhaps an inability to work, perhaps aches and pains all over. The diagnosis must be made from the history, which is that the distress came suddenly one day, perhaps with a fall, or a spell of dizziness, vomiting or mental confusion. Most significant in many cases is the associated disability which is out of proportion to the other symptoms. There may be character changes, loss of memory, loss of interests, and perhaps loss of all joy in life.

2:30 "Abnormal Uterine Bleeding Past Middle Age, and Its Management"

Robert D. Mussey, M.D., Rochester, Minn.



Head of Section on Obstetrics, Mayo Clinic; Professor of Obstetrics, Mayo Foundation Graduate School, University of Minnesota.

Robt. D. Mussey

Some 200 consecutive case records of patients with abnormal uterine bleeding examined in the year 1937 were studied to determine the various causes of such bleeding and their relative incidence, and to review diagnostic criteria and methods of treatment. In so far as it is possible this subject is treated from the viewpoint of the examination and diagnosis of the ambulatory or office patient for whom one or more of various methods of treatment may be advised, such as, medical, hormonal, radiologic or surgical; results of treatment are reviewed.

(T. R. Wilson, M.D., is co-author of this paper.)

3:00 "Poliomyelitis: Contrast Between the Kenny and Orthodox Concepts, with Results of Treatment"

Sister Elizabeth Kenny, Minneapolis, Minnesota



Originator of Kenny Method of treatment for poliomyelitis; Honorary Director of Elizabeth Kenny Institute, Minneapolis.

Sister Kenny

Infantile paralysis has been regarded in the past as a disease causing muscles of the body to become hypotonic and flaccid. Treatment for such condition was to rest the supposedly affected muscles by the application of splints and casts. On the contrary the muscles affected by the disease of infantile paralysis are hyperirritable and in spasm. The toneless and supposedly paralyzed muscles are the normal muscles. It is obvious that the true symptoms of the disease are quite the reverse from that of the previous conception. It follows that a treatment devised for flaccid paralysis could not be adapted to a disease in which the muscles have the averse condition or spasm of the muscles. Spasm is the damaging condition in acute infantile paralysis. Spasm in muscle precedes paralysis and causes destruction of muscles, shortening of muscles, and eventually produces deformities. Treatment properly designed and instituted early will prevent undesirable after-effects.

Attendance at this meeting will be limited to Doctors of Medicine.

A special meeting for the public, at which Sister Kenny will be guest speaker, has been arranged for Friday, September 24, 8:30 p.m., Ballroom, Statler Hotel, Detroit.

3:30 Half-hour Intermission to View Exhibits.

4:00 Discussion Conferences with Guest Essayists.

5:00 End of Seventh General Assembly.

END OF SCIENTIFIC SESSION

Guest essayists are very respectfully requested not to change time of their lecture with another speaker without the approval of the General Assembly. This request is made in order to avoid confusion and disappointment on the part of some members of the audience.

* * *

Technical Exhibits—60 displays—will open daily at 8:30 a.m. and close at 6 p.m. with the exception of Friday when the exhibits will close at 2 p.m. Frequent intermissions to view the exhibits have been arranged before and after the General Assemblies and Section Meetings.

PLEASE REGISTER AT EVERY BOOTH

Woman's Auxiliary



Mrs. G. L. Willoughby, President

COMMITTEE CHAIRMEN

Banquet—Mrs. Leo Bartemeier
Pre-Convention Luncheon—Mrs. O. W. Picard
Luncheon—Mrs. John M. Carter
Tea—Mrs. William L. Sherman
Flower Committee—Mrs. George M. Laning
Finance—Mrs. Robert L. Novy
Hospitality—Mrs. Milton A. Darling
Publicity—Mrs. E. C. Baumgarten
Registration and Credentials—Mrs. Ledru O. Geib
Exhibits—Mrs. Arthur Kretchmar
Printing—Mrs. L. Paul Sonda
Program—Mrs. Galen Ohmart
Courtesy—Mrs. Frederick Buesser
Pages—Mrs. N. O. LaMarche



Mrs. A. O. Brown, Chairman

The State Convention Committee of Detroit welcomes the Seventeenth Annual Convention of the Woman's Auxiliary to the Michigan State Medical Society, and we shall endeavor to make your stay in Detroit a memorable one.

Isabelle L. Brown

Program

Monday, September 20, 1943

6:30 P.M. **Dinner at the home of Mrs. Elmer L. Whitney for Past Presidents and Secretaries Club of State Auxiliary**
Mrs. Guy L. Kiefer—President
Mrs. Elmer L. Whitney—Chairman
(Acceptance essential)

Tuesday, September 21, 1943

10:00 A.M. **Registration—Hotel Statler**

10:30 A.M. **Finance Committee—Mrs. H. L. French, Chairman**

12:30 P.M. **Luncheon—Pre-Convention Board Meeting**
Salle Detroit, 2nd Floor, Hotel Statler.
Complimentary 1942-43 Board Members and County Presidents.
All members welcome to attend.

4:00 P.M. **Tea—Honoring National President—Mrs. Eben J. Carey**
Wayne County Medical Building
Hostesses—Wayne County Auxiliary

7:00 P.M. **Banquet — (Informal) — Michigan Room, Hotel Statler**
Presiding—Mrs. Gordon L. Willoughby
National Anthem—Led by Mrs. Gaylord Bates, accompanied by Mrs. Roland Athay
Welcome—Mrs. A. O. Brown, Chairman
Presentation of Past Presidents
Speakers and Honored Guests:
Dr. James E. Paullin, President of American Medical Association
Dr. H. H. Cummings—President of the Michigan State Medical Society
Dr. Frank Reeder, Chairman of Advisory Council
Mrs. Eben J. Carey, President Woman's Auxiliary to AMA
Play—given by Wayne County Auxiliary Members

Wednesday, September 22, 1943

8:00 A.M. **Registration—Hotel Statler**

9:00 A.M. **Formal Opening of Convention—Michigan Room, Hotel Statler**
Presiding—Mrs. Gordon L. Willoughby, President of the Woman's Auxiliary to the Michigan State Medical Society
Pledge of Allegiance—Mrs. G. M. Brown—President of Bay County Auxiliary
Introductions:
Address of Welcome—Mrs. T. Grover Amos—President of Wayne County Auxiliary
Response—Mrs. H. L. French
Greetings—Dr. Wyman D. Barrett—President Wayne County Medical Society
In Memoriam—Mrs. Alvin Thompson—President of Genesee County Auxiliary
Report of Mrs. A. O. Brown—Convention Chairman
Minutes of the 16th Annual Meeting—Mrs. Wm. B. Hubbard
Roll Call
Reports of Chairmen of Convention Committees, Credential and Registration
Convention Rules of Order—Mrs. C. W. Ely, President of Saginaw Auxiliary
Resolutions—Mrs. Wm. G. Mackersie, Wayne County Auxiliary
Report of Treasurer—Mrs. R. H. Alter
Auditor's Report—Mrs. R. H. Alter
President's Message—Mrs. G. L. Willoughby
Report of County Presidents
Report of Chairmen of Standing Committees
New Business
Unfinished Business
Report of Committee on Nominations—Mrs. Earl J. McIntyre
Reports of Chairmen of Special Committees
District Councilors
Presentation of Pin
Address—Mrs. John J. Walch
Adjournment

12:30 P.M. **Annual Luncheon—Palm Room, Book Cadillac Hotel**
Presiding—Mrs. A. O. Brown, Convention Chairman
National Anthem—Led by Mrs. Gaylord Bates, accompanied by Mrs. Roland Athay
Introductions
Speaker—Mrs. Eben J. Carey—President of the Woman's Auxiliary to the AMA.
Panel Discussion—Education for Victory and Peace
Mrs. Galen Ohmart, Chairman

3:30 P.M. **Post-Convention Board Meeting** (immediately following luncheon)
Palm Room, Book Cadillac Hotel
Presiding—Mrs. John J. Walch
1943-44 Postwar Auxiliary

8:00 P.M. **Presidents' Night—Michigan State Medical Society**
For members of MSMS, their wives and guests

TECHNICAL EXHIBITS

Baker Laboratories **Booth No. 40**
Cleveland, Ohio

Baker's Modified Milk, a completely prepared milk formula in both the powder and liquid forms, will be on display; also Melcose, a low-cost, but a completely prepared milk formula, and Melodex (maltose and dextrin) a carbohydrate made especially for modifying fresh or evaporated milk formulas. Our representatives will be glad to explain the merit of these foods, as well as the special advantages of using them today in view of food shortages, milk rationing, and other allied conditions.

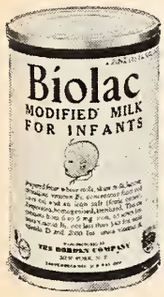
Bard-Parker Company, Inc. **Booth No. 6**
Danbury, Connecticut

The following products will be exhibited at the Bard-Parker Booth No. 6: Rib-Back Surgical Blades, Long Knife Handles for deep surgery, Renewable Edge Scissors, Formaldehyde Germicide and Instrument Containers, Transfer Forceps, Hematological Case for obtaining bedside blood samples.

Ernest Bischoff Company **Booth No. 52**
Ivoryton, Connecticut

In our exhibit we shall feature Lobelin Bischoff, respiratory stimulant and resuscitant in asphyxia neonatorum; Anayodin, an effective, nontoxic amebacide; Diatussin and Diatussin Syrup, antispasmodic; Activin, a foreign protein for non-specific therapy; Viscysate, for the symptomatic relief of hypertension; Sas-Par, antipruritic, oral treatment for psoriasis.

The Borden Company **Booth No. 49**
New York, New York



Today, with more American babies to be fed than ever before, The Borden Company is resolved to use every available resource to maintain an unfailing supply of scientific formula foods which provide the well balanced nutrition so essential in early life. These include Biolac, New Improved Dryco, Mull-Soy, Klim, and Merrell-Soule Powdered Milks.

Burroughs Wellcome & Co. (U. S. A.) Inc. Booth No. 27
New York, New York



Burroughs Wellcome & Co. (U.S.A.) Inc., New York (Booth No. 27), presents a representative group of fine chemicals and pharmaceutical preparations, together with new and important therapeutic agents of special interest to the medical profession.

Cameron Heartometer Co. **Booth No. 42**
Chicago, Illinois

The Cameron Heartometer Company is showing the improved Heartometer, a scientific precision instrument for accurately recording systolic and diastolic blood pressures. It also furnishes a permanent graphic record of the pulse rate, the nervous functioning of the heart, the myocardial activity, as well as the functioning of the valves. The Heartometer clearly reveals heart disturbances in both early and advanced stages and is of great value in watching the progress of medication and treatments.

Cameron Surgical Specialty Co. **Booth No. 1**
Chicago, Illinois

See the Cameron Flexible Gastroscopes and Cavicamera, the new Rosi Coagulo-Sigmoidoscope, Bronchoscopes, Esophagoscopes, Laryngoscopes, Binocular Prism Loupe, Mirrolite, Color-Flash Clinical Camera, Magniscope, and other new developments in electrically lighted Diagnostic and Operating Instruments for all parts of the body. Cameron Electro Surgical Units (the genuine Radio Knives) will also be on display.

S. H. Camp and Company **Booth No. 16**
Jackson, Michigan

S. H. Camp & Company, Jackson, Michigan, will exhibit a reproduction of the Camp Transparent Woman as the central theme of their display. The company's authorized dealers are equipped to serve patients for the various supports prescribed by physicians. The complete line of merchandise for prenatal, postnatal, visceroptosis, sacro-iliac, hernia and other specific conditions will be shown. Experts from the Camp Staff will be in attendance to answer questions.

Ciba Pharmaceutical Products, Inc. **Booth No. 57**
Summit, New Jersey

Physicians are cordially invited to visit the Ciba exhibit, where our Mr. Raymond S. Adamson will be in attendance and will gladly discuss any questions regarding the well-known CIBA specialties, including the newest, Privine Hydrochloride, a potent vasoconstrictor, and Trasentine-Phenobarbital, an effective antispasmodic and sedative.

Cottrell-Clarke, Inc. **Booth No. 4**
Detroit, Michigan

To enable medical men in these busy war days to extend their services to more and more patients, Michigan's progressive case record house of Cottrell-Clarke, Inc., Detroit, are showing, not only the latest of their newer labor saving case record developments, but also various ideas in patients' appointment systems and other office procedure.

Cream of Wheat Corporation **Booth No. 58**
Minneapolis, Minnesota



In Booth No. 58, both "Enriched 5-Minute" and "Regular" Cream of Wheat will be on display. "Zing!", stabilized wheat germ, will also be available for inspection. It is an economical, high vitamin germ that has been specially stabilized to prevent rancidity.

Davis & Geck, Inc. **Booth No. 53**
Brooklyn, New York **and Cinema Room**

Davis & Geck, Inc., will display its complete line of sterile sutures including a comprehensive group armed with swaged-on Atraumatic needles and designed for specific surgical procedures.

As in previous years, a further feature of this exhibit will be a motion picture theatre in which a diversified and timely program of surgical films, in full color, will be present daily.

Doho Chemical Corporation **Booth No. 12**
New York, New York

Animated Pathological Ear Exhibit. The Auralgan Exhibit consists of a model of the human auricle four feet high together with a series of twenty-four three dimensional ear drums, modelled under the supervision of outstanding otolgists. Each of these drums depict a different pathologic condition based upon actual case observation and prepared, in so far as possible, with strict scientific accuracy so as to be highly instructive and interesting to all physicians.

General Electric X-Ray Corporation **Booth No. 10**
Detroit-Lansing-Grand Rapids

We cordially invite the physicians and their families who attend this meeting to make use of the lounge facilities provided at our booth for their comfort. We particularly look forward to a visit from users of our equipment and a cordial invitation is extended to all physicians who may have technical problems to discuss with our staff in attendance.

Gerber Products Company **Booth No. 41**
Fremont, Michigan



Gerber's Cereal Food and Strained Oatmeal are fortified with vitamins of the B-complex and with iron. They are ready-to-serve upon addition of milk or formula. These and the other Gerber Foods are on display. We invite your inspection of the Gerber literature.

Hack Shoe Company **Booth No. 14**
Detroit, Michigan

Hack shoes fill a wartime essential need for foot weary war workers. Fatigue and occupational foot strain are important considerations indicating the need for prescription of supportive shoes. Military styles are available for those in Army or Navy service.

Hanovia Chemical and Manufacturing Company
Newark, New Jersey **Booth No. 50**

Hanovia will exhibit the very latest in ultraviolet equipment for industrial clinics, etc., also an entirely new model lamp to irradiate large groups of employes. The fitness and determination of each and every worker is of supreme importance to the war effort. The new Hanovia ultraviolet quartz lamp helps in keeping employes physically fit. Don't fail to ask for complete details. Competent representatives will be on hand to greet you and be of whatever service they can.

J. F. Hartz Company **Booths Nos. 29-30**
Detroit, Michigan



The J. F. Hartz Company will be pleased to exhibit at the MSMS postgraduate war conference a full line of surgical instruments and equipment.

The display will feature Hartz Pharmaceuticals, which are manufactured under the strictest laboratory control. Qualitative and identity assays are run on all crude drugs before incorporating them in our products, and quantitative assays are carefully made on all finished products before they are released to the physicians.

H. J. Heinz Company **Booth No. 5**
Pittsburgh, Pennsylvania

All physicians practicing pediatrics or prescribing soft diets should see the Heinz display featuring Strained and Junior Foods.
Be sure to register for the 11th edition of the Nutritional Chart, as well as our new Special Dietary Foods booklet and Baby's Diary and Calendar.

Holland-Rantos Company, Inc. **Booth No. 9**
New York, New York



The Holland-Rantos Co. will display the very latest industrial garments and beddings made from substitute products.

Be sure to examine the Rantex Caps and Masks, ideal for nontoxic nuisance dust.

Register for a sample of NYLMERATE, an antiseptic tincture for surgical treatment and first aid.

The universally known KOROMEX contraceptive specialities will be on display including the new Koromex Set complete, a combination package ideally suited for either prescription or dispensing purposes.

The G. A. Ingram Company **Booths Nos. 54-55**
Detroit, Michigan

The G. A. Ingram Company will be on hand to service their many customers with all materials available under present conditions, and with substitutes in the event the original materials and instruments are not available.

The Ingram Company is especially anxious that all members stop at their booth to see the Rhythmic Constrictor.

A. Kuhlman & Company **Booth No. 37**
Detroit, Michigan

A. Kuhlman & Co. will exhibit American Cystoscope Makers' cystoscopes and urological instruments and supplies, also C. R. Bard & Co.'s Bardex and Bardam catheters, etc., and a selected line of American made surgical instruments. The exhibit will be in charge of Henry A. Kuhlman. At convention time they will exhibit at their store at 3929 John R Street a valuable collection of old surgical instruments and equipment.

Lea & Febiger **Booth No. 13**
Philadelphia, Pennsylvania

Lea & Febiger will exhibit, in Booth No. 13, among their new works, Lichtman on Diseases of the Liver, Gall Bladder and Bile Ducts, Dyke and Davidoff on Roentgen Treatment of Diseases of the Nervous System, Moon on Shock and Moritz on The Pathology of Trauma. New editions will be shown of Gray's Anatomy, Speed on Fractures and Dislocations, Levinson & MacFate's Clinical Laboratory Diagnosis, Ballenger on the Nose, Throat and Ear, Ballenger's Manual of Otology, Rhinology and Laryngology, Boyd's Text-Book of Pathology and Kraines' Therapy of the Neuroses and Psychoses.

Lederle Laboratories, Inc. **Booth No. 51**
New York, New York

Lederle Laboratories, Inc., will exhibit their complete line of biologicals, including Globulin Modified Antitoxins; all of their pharmaceutical items with especial emphasis on sulfonamide products, oral as well as those for external use, such as sprays and ointments. Messrs. Sempowski, Gilbert, Faber and Oxley will be in attendance.

Libby, McNeill & Libby **Booth No. 59**
Chicago, Illinois

This exhibit features Libby's Homogenized Baby Foods and Evaporated Milk. Spectators see the story of these products explained in a slide film, and at the same time they listen in on an interesting dialogue over telephones at the booth. This dialogue can only be heard over the telephones.

The story itself is newsworthy, in that Libby's Baby Foods are homogenized by an exclusive Libby process whose advantages are succinctly described.

Eli Lilly and Company **Booth No. 19**
Indianapolis, Indiana

The Lilly exhibit is presented as a mark of respect for the Michigan State Medical Society. Many Lilly products will be shown and attending Lilly medical service repreesntatives will be pleased to aid physicians whenever possible.

J. B. Lippincott Company **Booth No. 56**
Philadelphia, Pennsylvania

Lippincott's headliner is the new one-volume war edition of Thorek's Modern Surgical Technic. Other significant and timely new Lippincott books are Ferguson's Surgery of the Ambulatory Patient, Strecker's Fundamentals of Psychiatry, Kampmeier's Essentials of Syphilology, Sappington's Essentials of Industrial Health, and Brown & McDowell's Skin Grafting of Burns.

The Liquid Carbonic Corporation **Booth No. 23**
Detroit, Michigan

We plan to exhibit our complete line of anesthesia and resuscitating gases at the Detroit Meeting of the Michigan State Medical Society. Mr. Joseph Esop and Mr. Earl Madole will be in attendance.

M. & R. Dietetic Laboratories, Inc. **Booth No. 35**
Columbus, Ohio

M & R Dietetic Laboratories, booth number 35, will display Similac, a food for infants deprived partially or entirely of breast milk; also powdered SofKurd. Our representatives will appreciate the opportunity to discuss the merit and suggested application of these products.

Mead Johnson & Company **Booths Nos. 46-47**
Evansville, Indiana

"Servamus Fidem" means We Are Keeping the Faith. Almost every physician thinks of Mead Johnson & Company as the maker of Dextri-Maltose, Pablum, Oleum Percomorphum, and other infant diet materials. But not all physicians are aware of the many helpful services this progressive company offers physicians. A visit to Booths No. 46 and No. 47 will be time well spent.

Medical Arts Surgical Supply Company **Booth No. 60**
Grand Rapids, Michigan

We shall show Hamilton Medical Equipment which is still available and Master line of surgical instruments some short waves, diagnostic instruments, etc. Also, our laboratory line of pharmaceuticals including tablets, ointments, solutions and specialties will be on display.
We invite you to come in.
Mr. Lepard, Mr. Oosting, Mr. Allen, Mr. Hadden, Mr. Klaver, and Mr. Williams will be in attendance at the booth.

Medical Protective Company **Booth No. 3**
Fort Wayne, Indiana

The most exacting requirements of adequate liability protection are those of the professional liability field. The Medical Protective Company, specialists in providing protection for professional men, invites you to confer, at their exhibit, with the representatives there, "Germany" Schulz and George A. Triplett. They are thoroughly trained in Professional Liability underwriting.

Mellin's Food Company **Booth No. 33**
Boston, Massachusetts

An exchange of ideas relative to the feeding of infants and in regard to the nourishment for adults requiring a restricted diet are of much value in view of the importance of selecting food best adapted to the individual requirement.
The Detroit Meeting will afford an opportunity for such discussion with representatives of the Mellin's Food Company and members of the Association are cordially invited to call at Space 33.

Merck & Company, Inc. **Booth No. 20**
Rahway, New Jersey

A set of Vitamin Reviews, containing up-to-date and factual information, in a convenient slip-cover container designed for ready reference in library or book case, is available at the Merck booth. Mr. S. A. Gaffney, in charge of the exhibit, will also be pleased to supply information on other products of interest to physicians.

Wm. S. Merrell Company **Booth No. 48**
Cincinnati, Ohio

The Merrell exhibit will feature clinical data demonstrating the effectiveness of oral vaccination with Oravax in reducing number, severity, and duration of colds, as reported in current medical literature. "Oravax offers the physician an opportunity to contribute manhours of production to the war effort by protecting colds-susceptible individuals against this greatest cause of disability.

Michigan Medical Service **Booth No. 26**
Detroit, Michigan

Graphic charts will be displayed showing the progress of Michigan Medical Service in its three years of operation, what makes a deficit, what corrects a deficit, how the plan needs the cooperation of the medical profession, how the medical profession may cooperate, what the medical profession is doing for the 450,000 people enrolled and how Michigan Medical Service is gradually being separated from Michigan Hospital Service.

C. V. Mosby Company **Booth No. 2**
St. Louis, Missouri

New publications to be displayed by the C. V. Mosby Company at Booth No. 2 will include Haid-Kessell "Tropical Diseases," Trueta "Principles and Practice of War Surgery," Titus "Atlas of Obstetric Technic," and Dodson "Operative Urology." New 1943 editions will include Clendening-Hashinger "Methods of Treatment," and Gradwohl's "Clinical Laboratory Methods and Diagnosis." Mr. Arthur Grabruck will be in attendance, ready to be of service in any way possible.

Pet Milk Company **Booth No. 28**
St. Louis, Missouri



A complete display of material illustrating the time-saving Pet Milk services available to physicians. Specially trained representatives will be in attendance to give you information about the production of Pet Milk and its use for infant feeding. Miniature cans will be given to each physician visiting the exhibit.

Parke, Davis & Company **Booths Nos. 44-45**
Detroit, Michigan

At the Parke-Davis Exhibit, which has been stream lined because of present wartime requirements, you will find many new and scientific Pharmaceutical and Biological Products. Included in this display are such outstanding preparations as Phemerol, a relatively non-toxic and non-irritating germicide and antiseptic; Vitamin Products; Sulfa Drugs; Despeciated Antitoxins, and numerous other outstanding products of timely interest. Able and courteous members of the Parke, Davis & Co. staff are in daily attendance to serve you.

Petrogalar Laboratories, Inc. **Booth No. 34**
Chicago, Illinois

Physicians are cordially invited to visit the Petrogalar exhibit at Booth No. 34 where a new and enlightening story on Petrogalar, an aqueous suspension of mineral oil, will be related. Beautifully colored anatomical drawings and new literature may be had upon request from our professional representatives who will be in constant attendance.

Philip Morris & Co., Ltd., Inc. **Booth No. 18**
New York, New York

Philip Morris & Company will demonstrate the method by which it was found that Philip Morris Cigarettes, in which diethylene glycol is used as the hygroscopic agent, are less irritating than other cigarettes. Their representative will be happy to discuss researches on this subject and problems on the physiological effects of smoking.

Picker X-Ray Corporation **Booth No. 25**
New York, New York

Picker X-Ray Corporation will show the U. S. Army Field Unit as well as the Light Weight Air Corps Unit of which they are exclusive manufacturers. This display of military medical equipment will be accompanied by a selection of interesting and authentic photographs showing the use of this apparatus under actual wartime conditions.

Proctor & Gamble Company **Booth No. 31**
Cincinnati, Ohio

At the Procter & Gamble booth, visitors will see demonstrated some of the qualities of Ivory Soap which have resulted in Ivory's being recommended "By more doctors than all other brands of soap together."
Copies of Ivory's new baby booklet, "Bathing Your Baby the Right Way," prepared with the cooperation of a world famous maternity center, will be available free of charge to visitors.

Professional Management **Booth No. 11**
Battle Creek, Michigan

PM

Professional Management again expresses its appreciation of the business of hundreds of Michigan doctors by making available to all who wish to stop, its knowledge and suggestions regarding withholding tax, income tax, office records and other phases of medical business.

Randolph Surgical Supply Company **Booth No. 21**
Detroit, Michigan

Randolph Surgical Supply Company will display office equipment that is available today, and will be of peace time construction.
The following representatives will be on hand to greet their many friends in the medical profession: Theo. Ward, Art Rankin, H. Stormhafer, and Cliff Randolph.

W. B. Saunders Company **Booth No. 22**
Philadelphia, Pennsylvania

This publishing house will exhibit their complete line of books, including such new ones as the Bockus' 3-volume work on "Gastro-enterology," Shaar & Kreuz' "External Fixation of Fractures," the Mayo Clinic Volume, Lundy's "Anesthesia," Wharton's "Gynecology," the Military Medical and Surgical Manuals, Official U. S. Public Health Service Industrial Hygiene Manual, Stiglitz' "Geriatrics," Cuttin's "Therapeutics," Dry's "Cardiology," Rehfuss' "Indigestion," Weisse & English's "Psychosomatic Medicine," and many others.

Scientific Sugars Company **Booth No. 7**
Columbus, Indiana

Scientific Sugars Company, Columbus, Indiana, Booth No. 7, will display Cartose, Hidex, and the Kinney line of nutritional products. A new preparation of interest to physicians will be featured.

Sharp & Dohme **Booth No. 32**
Philadelphia, Pennsylvania

Sharp & Dohme will have their display at Booth No. 32, featuring 'Lyovac' Normal Human Plasma, other 'Lyovac' biologicals and biological specialties. There will also be on display pharmaceutical specialties including "Sulfasuxidine" succinyl-sulfathiazole, "Delvinal" Sodium, "Propadrine" Hydrochloride products, "Rabellon," "Depropranex," and "Prohexinol." A cordial welcome awaits all visitors.

S.M.A. Corporation **Booth No. 15**
Chicago, Illinois

Among the technical exhibits at the convention this year is an interesting display which represents the selection of infant feeding and vitamin products of S.M.A. Corporation. Physicians who visit this exhibit at Booth No. 15 may obtain complete information on S-M-A Powder and the special milk preparations —Protein S-M-A (Acidulated), Alerdex and Hypo-Allergic Milk.

Smith, Kline & French Laboratories **Booth No. 17**
Philadelphia, Pennsylvania

Benzedrine Sulfate tablets will be featured at this exhibit. It has been said that Benzedrine Sulfate offers "a therapeutic rationale which, in its very efficiency, cuts across the old categories." It is, therefore, useful in many widely varied fields of medicine.

Won't you call upon us if you desire information about the use of this highly important compound in depressive states; as an adjunct in the treatment of alcoholism; and in postencephalitic Parkinsonism, narcolepsy? One of our professional representatives will be glad to discuss with you its potentialities and possible indications in your own practice.

Benzedrine inhaler, N.N.R., "Paredrine Hydrobromide Aqueous," "Paredrine"—Sulfathiazole Suspension, Pragmasul and Eskay's Pentaplex will also be exhibited.

E. R. Squibb & Sons **Booth No. 24**
New York, New York

A number of new and interesting Vitamin, Glandular, Biological and Chemotherapeutic specialties will be featured in the Squibb Exhibit in Booth 24.

Well-informed Squibb Representatives will be on hand to welcome you and to furnish any information desired on the products displayed.

Frederick Stearns & Company **Booth No. 39**
Detroit, Michigan

Doctors are cordially invited to visit our attractive convention booth to view and discuss outstanding contributions to medical science developed in the Scientific Laboratories of Frederick Stearns & Company.

Our professional representatives will be pleased to supply all possible information on the use of such outstanding products as Neo-Synephrine for intranasal use, Amino Acids for parenteral protein feeding, Mucilose for bulk and lubrication, Ferrous Gluconate, Potassium Gluconate, Gastric Mucin, Susto, Trimax, Appella Apple Powder, Nebulator with Nebulin A, and our complete line of Vitamin products.

White Laboratories, Inc. **Booth No. 43**
Newark, New Jersey

Within recent years tremendous advances in vitamin research have added a wealth of clinical data to our knowledge of nutrition.

The intense interest of the laity, in the vitamins—often, unfortunately, confused and misled by unauthoritative lay advertising and uninformed "information"—can be properly controlled by the physician's interpretation of the actual usefulness of the vitamins to his patients.

In Booth No. 43 White Laboratories, Inc., presents its complete line of ethically promoted, clinically reputable vitamin preparations. Qualified representatives are in attendance to discuss with you the use of White's products in vitamin prophylaxis and therapy. Descriptive literature is available for your review, and a cordial welcome awaits you.

John Wyeth Chemical Company **Booth No. 8**
New York, New York

John Wyeth & Brother, Inc. **Booth No. 8**
Philadelphia, Pennsylvania

You are cordially invited to visit the Wyeth exhibit where information will be available on any Wyeth Products and other services. The new treatment of Peptic Ulcer, "Phosphaljel" will be featured.

Zimmer Manufacturing Company **Booth No. 36**
Warsaw, Indiana

Zimmer Manufacturing Company will exhibit in Booth No. 36 the regular line of fracture equipment, and the popular Luck Bone Saw with all its attachments. Various other items that have been standardized by the U. S. Army and Navy will be on exhibition. The new instruments which have recently been designed by Dr. Walter P. Blount, along with the new Corbett Finger and Thumb traction splints, and the Zimmer Reduction and Retention Apparatus will be items of interest to every surgeon. Mr. C. A. Fisher, our Michigan representative, will be in charge of the booth.

Be Sure to Visit
Every Booth
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YOU AND YOUR BUSINESS

(Continued from Page 625)

lowed by the difficulties and problems of peace. Are we preparing in any way to solve or to avoid them in the sphere of medicine? Smug complacency will not save us nor give society our best leadership. The public looks to us for guidance in matters of health and disease. Such guidance and the solution of world problems just do not follow spontaneously. *Our future and the future of medical practice depends on what we do today.*

The government and the public are looking forward to the prevention of illness and to the provision of full coverage of all health needs. We see many straws in the winds of public opinion all blowing that way. The profession can solve the problem of covering the needs in medical care but if we fail to interest ourselves in it, the people, through our Government, will. Rather than wait and try futile resistance to a bureaucratic plan for medical care, let us assume leadership at once and find a solution of this problem satisfactory to all.—Editorial note, J. M. Soc., New Jersey, June, 1943.

To our business friends in the Technical Exhibit, the Michigan State Medical Society expresses sincere thanks for their splendid coöperation and very tangible conrtbution to the great success of the 1943 Conference.

■ COMMITTEE REPORTS ■

ANNUAL REPORT OF THE COUNCIL, MSMS, 1942-43

The Council met three times and the Executive Committee convened nine times (up to September 19, 1943), a total of twelve meetings since last September's Annual Meeting of the Michigan State Medical Society. As in the past, all the business of the Society, including matters studied and recommendations made by its 26 committees, were referred routinely to The Council or its Executive Committee for consideration, approval and action.

Membership

Members of the State Society as of July 31 and as of December 31, from 1935 to 1943, are indicated in the following chart:

	1943	1942	1941	1939	1937	1935
7/31	4,661	4,553	4,403	4,255	3,757	3,410
12/31	....	4,714	4,621	4,425	3,963	3,653

The figures for 1943 include 3469 Active Members, 65 Emeritus and Honorary Members, and 1,127 Military Members. Members in military service are accorded full membership privileges in the State Society but their dues are remitted.

Finances

The usual Ernst & Ernst audit, covering the Society's fiscal year ending December 26, 1942, was published in the March, 1943, JOURNAL, pages 221-222-223.

The Council, after careful study of this audit and with estimates of anticipated receipts and expenditures for the year 1943, drew up and adopted the budget. This was published in the March JOURNAL, page 219, to which we invite your attention.

In 1943 we estimated a loss of 470 dues-paying members, through loss to military service. Whereas we expected 3630 paying members for the full year, the actual figures on June 15th were only 3429; a loss of 671 from 1942 estimates will result if no additional physicians' names are certified as members during the last half of the year. We estimate further loss of members and revenues from dues for 1944.

The Society probably will operate at a loss in 1943 as compared with budget estimates, and this will be financed from reserves.

Next year a more drastic loss of revenue undoubtedly will follow. This may require an increase in dues in 1944. Such an assessment has previously been authorized each year for several years, but so far has not been levied.

The invested funds of the Society are still in high grade bonds, the majority in U. S. Government and Defense Bonds.

There will be no savings from current operations as it has been considered prudent to maintain the society activities to the highest possible extent consistent with our financial condition. Our invested funds have been accumulated during past years for this express purpose.

The Journal

Some changes and numerous problems of policy have confronted the Publication Committee during the past 1942-43 fiscal year.

Our former Editor, Roy Herbert Holmes, M.D., was commissioned in the armed forces of the U. S. in August, 1942 and at the meeting of the Publication Committee, September 21, Wilfred Haughey, M.D., was appointed temporary acting Editor of THE JOURNAL until the annual meeting of The Council in January 1943, at which time Dr. Haughey was appointed Editor of THE JOURNAL to succeed Dr. Holmes.

One of our most difficult problems has been the continuance of THE JOURNAL to members of the MSMS in the armed forces. Due to frequent changes of address it became difficult to forward THE JOURNAL to these members. At the January meeting it was finally decided to send THE JOURNAL to the last *permanent address* of members in the service and if no permanent address be available, THE JOURNAL was to be discontinued. Notice to this effect was mailed to all military members.

The matter of advertisements in THE JOURNAL was fully considered. There has been a feeling by some that advertisements be accepted by the AMA Councils of products which are manufactured by reliable firms and used by many physicians but which, through delay or other reasons, are not as yet Council-accepted. At the January meeting, the Publication Committee went on record that "these prospective advertisements be not accepted in the MSMS JOURNAL until definite standards concerning them are established by the AMA Councils."

The matter of advertising and the securing of advertisements for this and other State Journals by the Cooperative Medical Advertising Bureau of the AMA again came up for discussion at a conference meeting of editors and managing editors of the official journals of state medical societies, held in Chicago on June 5th at the request of numerous editors and others connected with official state journals. As a result of the meeting it was recommended that two members representing the State Journals be added to the CMAB committee of the AMA and the policy of advertising only of Council-accepted products be continued. The carrying of other local advertisements of non-medical products was approved in principle.

The Publication Committee has approved a policy of acceptance of outstanding papers read before the Wayne County and other county societies of the State in order that interest and encouragement to write medical papers be stimulated among the writers from the Michigan profession.

The Publication Committee continues to furnish to the profession through the pages of THE JOURNAL all available information concerning trends in medical practice and to maintain the present high standards in the publications of THE JOURNAL of the MSMS.

County Societies

Our membership continues to show marked interest in county society activities, both in local meetings and in the regional postgraduate sessions. It is particularly gratifying to note the large response by our county secretaries to requests for information and expressions of local opinion in regard to questions of state-wide interest.

Those of our doctors who remain in civilian practice are doing a superb job in supplying medical care to the people of the state, as there is very little complaint of lack of this service, except in those localities whose mushroom growth overwhelmed the abilities of available medical personnel.

Organization

O. D. Stryker, M.D., Fremont, and Dean W. Myers, M.D., Ann Arbor, were appointed as Councilors during the past year to fill vacancies which occurred when Councilor Roy Herbert Holmes, Major, M.C., and Councilor Lester J. Johnson, Lt. Commander, M.C., departed for military service.

Organization in the eighty-three counties continues in excellent condition, despite wartime demands on the materially decreased number of our active practitioners. Thanks are due the county society officers for their hard work as well as for their constant coöperation with the State Society.

The County Secretaries' Conference of January 24, 1943, in Lansing, was well attended. At this second "war meeting" of the secretaries, spirited discussions evidenced the continued enthusiasm of our county officers in their organizational efforts.

Thirteen Secretary's Letters were mailed during the

year, five to all members of the Society and eight to Presidents, Secretaries and Editors of county societies.

A. M. A. Delegates.—As in the past, the Executive Committee of The Council held a meeting with Michigan's Delegates to the A.M.A. House of Delegates on May 19 and discussed a number of important economic problems which subsequently were on the agenda of the Chicago meeting in June.

Committees

The progress of the State Society is reflected in the work of our very active committees; we earnestly invite your consideration of the splendid annual reports of these productive groups, published in THE JOURNAL and the Delegates' Handbook.

Scientific Work.—The 1943 annual meeting, called the "Postgraduate Conference on War Medicine," has been streamlined to meet conditions. Scientific quality, however, has been maintained and is best evidence of the many months of preparation made by the Committee on Scientific Work.

Postgraduate Medical Education Committee. — The MSMS Foundation for Postgraduate Medical Education, created in 1942 upon recommendation of the House of Delegates, ultimately will insure not only a continuation but an increase in the standard and quantity of postgraduate medical education in Michigan. Contributions are earnestly recommended so that the value of the Foundation may soon be felt in this state. *A recommendation on this subject follows.*

Industrial Health Committee.—The Postgraduate Industrial Conference of April 8 in Detroit was a worthwhile venture and should be made an annual feature, especially during wartime.

Committee on Distribution of Medical Care.—This Committee recently recommended that a special temporary committee be appointed for purposes of exchanging ideas referrable to medical care, the personnel to consist of equal numbers of medical and of labor representatives. This recommendation was approved in light of the educational direction to be achieved from this coöperation.

All the State Society committees functioned well during the past year; space in this report permits only a word of sincere thanks to our committee chairmen and members for outstanding services performed in behalf of all members of the State Society.

Contacts With Governmental Agencies

Legislative Contracts.—The year 1943 was a legislative year. The Legislative Committee maintained important day-and-night activity during the session of Michigan's Legislature. A total of 52 bills of interest to the practitioner of medicine were watched and guided by your Legislative Committee. Eleven weekly Legislative Bulletins were sent to 357 key-men throughout the state, keeping the profession informed on legislative activity. To quote from this Committee's report: "No proposed legislation that would have lowered our present high medical standards was enacted into law this session!"

Thanks are due the friendly members of the Legislature and our Governor and Lieutenant Governor who gave courteous consideration to the medical profession's representatives. *A recommendation on this subject follows.*

Procurement and Assignment Service.—The Michigan medical profession's direct contribution in manpower to the war effort, to date, has been 1,841 Doctors of Medicine.

Pursuant to The Council's recommendation, a survey of civilian needs for medical care was made by county society secretaries; the results were presented at the County Secretaries' Conference last January. These findings, published in the MSMS JOURNAL, February, 1943, page 142, verified a similiar survey made by Michigan Procurement & Assignment Service. As a direct result of this study, P. and A. S., through Chairman P. R. Urmston, M.D., has protected civilian and industrial health by fighting against further reduction in the number of Michigan practitioners serving the "home front." Physicians practicing in Michigan are now "frozen," although a limited few may be invited to relocate, on a voluntary basis, to bring needed medical care to certain distressed areas.

Michigan State Board of Control for Vocational Education — Rehabilitation Program. — This experimental program with Michigan as the test state, (outlined in detail on page 143, February MSMS JOURNAL, was the basis for conferences with the Vocational Education Board in January and February. A representative of the medical profession was appointed to serve on the Advisory Committee handling the Board's rehabilitation program so that proper medical advice in this experiment may be obtained.

Obstetric-Pediatric Care for Wives and Infants of Enlisted Men.—This proposed program was presented in April and was the basis of much negotiation, contacts, and correspondence. In line with the American Medical Association, the MSMS Council feels that federal grants should be made direct to wives and dependent infants of enlisted men to provide all the necessities of life, including medical care, and that such federal funds so paid to enlisted men's wives be used by the recipients as necessity requires. The wives and dependent infants of service men should be given adequate medical care *as private patients* by Doctors of Medicine. It is interesting to note that just one year ago, your Council warned the House of Delegates of this probable program—one of five trends of governmental intrusion in the Private Practice of Medicine (MSMS JOURNAL, Nov. 1942, p. 964).

HR-2041, which would continue this obstetric-pediatric program for the duration and six months after the war's end, is now in the federal Congress. The annual appropriation is set at $6,000,000. Amendments to this proposal to include the democratic principles indicated above, are requisite. *A recommendation on this subject follows.*

Michigan Crippled Children Commission. — Excellent relations continue to exist between the State Society and the Michigan Crippled Children Commission. During the past year, the Commission revised upwards its schedules of benefits, after conferences with representatives of the State Society. However, these improvements in schedules will be of no benefit to practitioners in those counties where the medical society has not revised county fee schedules which are on a lower level than that of the M.C.C.C. It is to be noted that the State pays one-half the cost of Home and office medical welfare; county and district medical societies have the opportunity now to negotiate new agreements with local welfare boards if present fees are below cost; the State Social Welfare Commission does not tell the county what fees it must pay for food or other commodities, including medical care. *A recommendation on this subject follows.*

Basic Science Board.—A number of states have passed rigid legislation or have obtained judicial interpretations which are discouraging irregular practice. As a result, substandard practitioners are moving to other states, including Michigan. Some who are not eligible for commissions as officers in military service have been declared essential for civilian care by Selective Service! An influx into Michigan of hundreds of these ill-qualified persons is discouraged in the main by the existence of the Basic Science Act of 1937. A most vigorous enforcement of the Act, to stem the flood of unqualified sectarian healers, is vitally necessary; the medical profession must lend its encouragement and support to the five members of the Basic Science Board entrusted with this responsibility. *A recommendation on this subject follows.*

Michigan Social Welfare Commission. — A "screening" program of fathers of Dependent Children is being developed which will include initial examinations by

Doctors of Medicine and subsequent rehabilitation where necessary. This program will be tested in one county and if successful will be spread to all counties where the medical societies approve the activity. *A recommendation on this subject follows.*

Contacts With Non-governmental Agencies

Friendly contacts with voluntary groups interested in the distribution of medical service to the public continued during the past year. Contacts with the dental and pharmaceutical associations were intensified through the activity of the Professional Liaison Committee. A meeting with representatives of the State Bar of Michigan was held by the Syphilis Control Committee in May which led to the formation of a joint committe to study methods for venereal disease control.

Voluntary Panel in Workmen's Compensation Cases.—This subject is being studied by The Council at the suggestion of the two national insurance associations. It is anticipated that deliberations on such an important matter will be of many months' duration.

Michigan Medical Service.—Statistical data on this corporation will be presented in the Supplemental Report of The Council on September 20. The Delegates, as Members of Michigan Medical Service, will receive detailed reports from the corporation at its Meeting of Members on Tuesday, September 21 in Detroit.

Miscellaneous

Michigan Physicians in Military Service.—A total of 1,841 Michigan Doctors of Medicine are in the armed forces. These self-sacrificing, courageous physicians, as officers in the Medical Corps of the Army and Navy, are serving their country in all parts of the world. We are mightily proud of these Doctors of Medicine and must do all we can for them now and upon their return.

Of our medical soldiers, 602 are not members of the Michigan State Medical Society (including 137 who were interns and residents at the time they received commissions).

The suggestion that Military Membership in the MSMS be offered to *all* Michigan Doctors of Medicine who are in Service, whether or not they had been members of the State Society in the past, is referred to the House of Delegates for consideration. Such offer of membership would be contingent on approval of the individual physician by the county medical society in which he resided. *A resolution on this subject follows.*

Postwar Postgraduate Medical Education.—At its annual meeting in January, The Council requested the Postgraduate Medical Education Committee to develop a definite planned program of postwar postgraduate work and medical refresher courses designed primarily to aid physicians returning from the armed forces. The Postgraduate Committee is planning such a program for inauguration immediately upon termination of the present conflict.

Temporarily Retired (Sick) Members.—No provision exists in the present MSMS Constitution to continue the membership of the occasional member who is forced out of practice due to protracted illness. Some type of membership for these temporarily retired physicians should be provided. *A recommendation on this subject follows.*

Matters Referred by 1942 House of Delegates

The following matters, discussed by the 1942 House of Delegates and referred to The Council, were accorded the following action:

1. *Creation of Fund to Educate Children of Deceased Physicians.*—The Finance Committee of The Council adopted the following statement on this proposal:

"The resolution to raise a fund to educate children of certain physicians by a contribution of $1.00 per member per year until an adequate fund has been raised has been considered. It will be recalled that the Committee on Resolutions of the House of Delegates voted against the resolution but asked that it be referred to the Finance Committee of The Council for further consideration.

"This Committee would quote the Constitution of the Society, Article 2, as follows:

" 'Purpose: Section 1. The purposes of this Society are to promote the science and art of medicine, the protection of the public health and the betterment of the medical profession, and to unite with similar organizations in other States and Territories of the U. S. to form the American Medical Association.'

"It is our considered opinion that while the motive behind the resolution is laudable, provision for such activity is not specified in the Constitution and we therefore cannot recommend its adoption."

This action was approved by The Council at its annual meeting of January 16-17, 1943.

2. *Emeritus Membership for physicians who have attained their Seventieth Year,* regardless of other qualifications: The Council referred this question to the Committee on Revision of Constitution and By-laws (C. L. Hess, M.D., Chairman) which made detailed investigations of the matter from all angles. The final report of the Committee is embodied in a resolution which will be presented to the House of Delegates by Dr. Hess.

3. *Indemnity Insurance.*—The resolution urging all medical indemnity insurance companies to continue medical protective policies in force as long as a doctor of medicine is in active practice, was referred to all insurance companies offering this type of coverage. We are happy to advise that all companies are coöperating with the wishes of the House of Delegates in this regard.

4. *Group Disability Insurance* for all members of the Michigan State Medical Society: A letter was sent to all county medical societies asking if they already had this type of coverage, and where no group policy existed, whether they would be interested in same. The matter was presented at the County Secretaries' Conference of January 24, 1943, and a poll was taken to ascertain if this protection was desired. The survey indicated that members of most of the larger county medical societies are already covered by group disability insurance and that only a few of the smaller societies appeared to be interested. The Executive Secretary of the Health & Accident Underwriters' Conference who addressed the January meeting felt that if the number to be covered was small, the matter should be delayed pending sufficient demand. In view of the lack of numbers at this time, The Council felt that action should be postponed.

Recommendations

The Council recommends:

1. That the individual members of the House of Delegates become "Ambassadors" of our Postgraduate Foundation and encourage other Doctors of Medicine, as well as laymen interested in sound medical service and education, to contribute during life and in their wills to the MSMS Foundation for Postgraduate Medical Education.

2. That the House of Delegates formally express the medical profession's appreciation and gratitude to the intelligent and health-minded members of the Michigan Legislature and to the Governor and Lt. Governor for their thoughtful consideration of the legislative problems of the medical profession, and for the courteous reception they extended to our representatives during the 1943 sessions.

3. That the House of Delegates respectfully request the American Medical Association, through its new Council on Medical Service and Public Relations, to use its influence to the end that HR-2041 is properly amended to safeguard controls and to insure the following democratic principles:

(a) That federal grants be made direct to wives and dependent infants of enlisted men to provide the necessities of life, including medical care;

(b) That such federal funds so paid to enlisted men's wives be used by the recipients as necessity requires;

(c) That the physician-patient relationship on a fee basis be maintained.

(d) That the program end six months after the termination of the present war

and further, that the Michigan State Medical Society and the individual members of the Michigan profession continue contact work and efforts with Michigan's Senators and Congressmen in Washington, D.C., to counteract the gradual intrusion of State Rights, exemplified in HR-2041 as introduced.

4. That county or district medical societies having arrangements whereby medical welfare (including Afflicted Adult care) is given at less than cost price or below the fee schedule of the Michigan Crippled Children Commission, be urged by the House of Delegates to make special efforts immediately to negotiate necessary revisions in its schedules of benefits so that individual members are not penalized by being forced to perform services at a financial loss.

5. That the Basic Science Board be respectfully urged by the House of Delegates to investigate the influx into Michigan of sub-standard practitioners who are said to be emigrating from other states having rigid requirements made by legislative action or judicial determination, and that the Board vigorously enforce Section Six of the Basic Science law (Act 59 of the Public Acts of 1937) which states:

"No examining board for any branch or system of healing shall admit to its examinations, or license, or register, any applicant to such board, unless such applicant shall first present to said board a certificate of eligibility in the basic sciences issued under the provisions of this Act";

and that the Michigan State Medical Society offers its encouragement and support to the Basic Science Board in the accomplishment of its responsible tasks.

6. That county medical societies consider approval of the "screening" program of fathers of Dependent Children, sponsored by the Michigan Social Welfare Commission, in the light of its advantages to the fathers of Dependent Children who can be rehabilitated, and to the taxpayers who will be relieved of a considerable financial burden.

7. That Military Membership in the MSMS be offered to all Michigan Doctors of Medicine who are in Military Service, provided approval of the individual physician's name is given by the county medical society in which he practiced prior to his entrance into military service.

8. That the House of Delegates consider an amendment to the MSMS Constitution to provide a new membership classification, such as "Temporarily Retired Members," in order that the membership of the occasional physician who is forced out of practice due to protracted illness may be continued, without the payment of dues.

9. That the House of Delegates consider the adoption of a Resolution strongly opposing the Wagner-Murray-Dingell Bill (S. 1161, introduced into Congress June 3, 1943) as well as any other scheme leading to a complete compulsory sickness insurance program organized and maintained by the government; and that county medical societies and their individual members maintain vigorous action against the gradual intrusion of government in the private practice of medicine so that the proponents of State Medicine shall not be successful in their aggressive attempt to socialize medical practice during wartime.

Respectfully submitted,
A. S. Brunk, M.D., *Chairman*
O. O. Beck, M.D., *Vice Chairman*
R. C. Perkins, M.D.,
Chairman, Publication Committee
V. M. Moore, M.D.,
Chairman, Finance Committee
E. F. Sladek, M.D., *Chairman,*
County Societies Committee
Wilfred Haughey, M.D.
C. E. Umphrey, M.D.
R. J. Hubbell, M.D.
T. E. DeGurse, M.D.
O. D. Stryker, M.D.
W. H. Huron, M.D.
P. A. Riley, M.D.
R. S. Morrish, M.D.
W. E. Barstow, M.D.
A. H. Miller, M.D.
Dean M. Myers, M.D.
P. L. Ledwidge, M.D.,
Speaker of the House
H. H. Cummings, M.D., *President*
C. R. Keyport, M.D., *President-elect*
L. Fernald Foster, M.D., *Secretary*
Wm. A. Hyland, M.D., *Treasurer*

ANNUAL REPORT OF COMMITTEE ON DISTRIBUTION OF MEDICAL CARE, 1942-43

The one meeting of the Committee on Distribution of Medical Care was called on April 15, 1943. The purpose of the meeting was to discuss: (1) the medical situation at Willow Run Bomber Factory and adjacent territory; (2) plans to be presented by the UAW-CIO regarding the housing projects; (3) the Medical Research Institute of the UAW-CIO at the request of James E. Davis, M.D., and (4) other matters referred by the Executive Committee of The Council.

Because of the extensive ramification of the medical problem of war industry, particularly the situation in Western Wayne and Washtenaw Counties, it was deemed desirable to have a thorough representative meeting before discussing any particular plans. To this end, an afternoon and evening session was held. Representative men of the medical profession, particularly interested in the problem, were invited. Representatives of the various war agencies were present as were members of the UAW-CIO. An attendance of approximately 60 men was obtained.

The afternoon session was given over to a short discussion by qualified speakers on various phases of medical problems such as public health, hospitalization, physician shortage, allocation of physicians, economic situations, etc. Speakers in the afternoon session were Mr. William Dorn of the War Manpower Commission, Mr. H. C. Scott of the Federal Housing Administration, Otto K. Engelke, M.D., Washtenaw County Health Officer, Paul A. Klebba, M.D., Detroit, Bruce H. Douglas, M.D., Detroit, Albert Parker, M.D., Wayne County, T. K. Gruber, M.D., Wayne County, S. W. Donaldson, M.D., Ann Arbor, C. D. Moll, M.D., Procurement and Assignment Service Vice-Chairman for Michigan.

Discussion brought out the facts that the plans for the Housing Projects in and about Willow Run were still in a state of uncertainty, that the original figures had been considerably reduced by the farming out of work. Nevertheless, it was forcibly presented that the demand on the public health facilities, housing facilities and physicians was being considerably strained. In this area before the war, there was one doctor to every 3,400 persons and at the present time there is one doctor to every 5,000. Efforts were being made to induce doctors to locate in this community and through the efforts of the Procurement and Assignment Service, Dr. Moll indicated that a certain degree of success was being attained. As far as the Willow Run project itself was concerned, 4 or 5 doctors were considered all that would be necessary to handle the situation there. The need for hospitalization was acute and possible solutions were being developed and some results to alleviate this shortage were in sight. The public health situation, because of the conflicting authority and question of source of funds, presented quite a problem. The formation of a Wayne County Health Department was a step that already had been taken to correct part of these difficulties.

The evening session was given over to the presentation of the problem of the UAW-CIO. Dr. Davis, Mr. L. M. Gilbert and Dr. Norris Raskin spoke. The basic

idea expressed was to formulate a comprehensive medical program for our housing projects with the eventual aim of extending the services wherever possible. No concrete plan was presented. A request was made that a Committee be established to consider the problem. This committee would be composed of representatives of the Michigan State Medical Society, the public and the UAW-CIO.

It was brought out that two problems presented themselves: (1) obtaining medical care and (2) a possibility of some prepayment plans, comprehensive in its scope. Estella Ford Warner, M.D., of the U. S. Public Health Service, indicated that her department did not consider sending men into the area, that it believes in the free choice of physicians in the area. Some project health nurses would be provided to work under the direction of the doctors.

Dr. Davis outlined the function of the Medical Research Institute of the UAW-CIO. He indicated that the Institute was intended for diagnostic and research work referrable to the problems of labor and no treatments would be given—that legal advice would be available. He stated that "we want to coöperate with the Michigan State Medical Society and the State Department of Health and County Societies to fight illness, colds, fatigue and absenteeism." A general discussion of questions by various members present was obtained.

Following this, the Committee met at 10:30 p.m. Those present were Drs. R. L. Novy, E. I. Carr, H. F. Dibble, I. W. Greene, H. B. Saltonstall, Wm. P. Woodworth and Executive Secretary Wm. J. Burns. The following comments were made by the Committee. Attempts were being made to locate physicians on a free choice of physician fee basis in the Willow Run and adjoining districts. The attitude of the U. S. Public Health Service, Procurement and Assignment Service and other groups empowered to care for this program, was in accord with this free choice of physician fee basis and that there was to be no competition of salaried government men. It was also brought out that there was a need for better housing for the doctors of medicine in this locality and housing facilities were vitally needed and should be pressed for. It is to be noted that nurses in the infirmary at Willow Run are supplied by the U. S. Public Health Service and are available to physicians. The Willow Run district seems to be an opportunity for physicians as this is a community of the highest paid wage earners in the world.

In regard to insuring the workers on some prepayment plan, full discussion was held and a motion made that a special temporary committee be appointed to study this problem.

In regard to the request of James E. Davis, M.D., regarding a list of specialists to whom members of the UAW-CIO may be referred, it was felt that the Society was not in a position to so designate members and suggested that Dr. Davis use the American College of Physicians, Surgeons, etc., and the accredited National Boards as published.

Other items were considered and disposed of.

Respectfully submitted,
R. L. Novy, M.D., *Chairman*
E. I. Carr, M.D., *Vice Chairman*
A. F. Bliesmer, M.D.
H. F. Dibble, M.D.
I. W. Greene, M.D.*
G. B. Saltonstall, M.D.
Wm. P. Woodworth, M.D.
Wm. R. Young, M.D.
H. B. Zemmer, M.D.

*Deceased June 28, 1943.

ANNUAL REPORT OF MATERNAL HEALTH COMMITTEE, 1942-43

The Maternal Health Committee held two meetings during the year, the first on November 19, 1942. The problem of having the maternal homes and hospitals licensed through the Michigan Department of Health rather than the Michigan Social Welfare Department, was further discussed. The report of the previous committee was reported in The Journal and the recommendation has been forwarded to The Council that this be placed in the hands of the Legislative Committee for action. Contact was made with the Michigan Hospital Association which is planning to submit a hospital licensing law to the legislature and it was recommended to the Michigan Hospital Association that the licensing be done by the Department of Health.

The suggestion of the previous committee that a maternal mortality study be made was discussed and submitted to the State Health Department but has been dropped for the time being because there is no available personnel to make the study and because the doctors, in the present emergency, would not have time to discuss their cases with an investigator.

A second meeting was held on May 2, 1943, together with the Child Welfare Committee. The federal program for maternal and infant care of wives and infants of enlisted men in the armed forces was discussed. The Committees were interested in seeing that wives and infants have adequate care but appreciated that this was the entering wedge of socialized medicine, which will endanger the democratic practice of medicine and therefore should be submitted to the State Society as a whole. This program emphasizes the need for an educational bureau in the national capitol supported by the medical profession, so that the interest of the medical profession will be safeguarded at the birth of bills which relate to the practice of medicine.

Respectfully submitted,
Clarence E. Toshach, M.D., *Chairman*
A. E. Catherwood, M.D.
E. N. D'Alcorn, M.D.
Harold Henderson, M.D.
N. F. Miller, M.D.
Harold W. Wiley, M.D.
Alexander M. Campbell, M.D., *Advisor*

ANNUAL REPORT OF COMMITTEE ON POST-GRADUATE MEDICAL EDUCATION, 1942-43

During the months of October, 1942, and April, 1943, the extramural practitioners' course was given in the centers of Saginaw-Bay City, Battle Creek-Kalamazoo, Flint, Lansing, Jackson, Mount Clemens, Grand Rapids, Ann Arbor, Traverse City-Cadillac, and in five centers in the Upper Peninsula: Sault Ste. Marie, Marquette, Houghton, Ironwood, and Powers.

The subjects presented in the Lower Peninsula were:

October, 1942

Surgery of the Ambulatory Patients.
The Modern Treatment of Cardiac Failure.
The Acute Abdomen. Panel discussion.
Psychosomatic Medicine.
The Industrial Dermatoses and Fungus Disease of the Skin.
Accidents and Complications of the Newborn Period, and Postpartum Care. Panel discussion.

April and May, 1943

Recent Advances in Immunization Procedures.
Recent Advances in Obstetrics.
The Diagnostic Significance of Pain. Panel discussion.
The Differential Diagnosis and Management of Hypertension.
The Indications for and the Use of Plasma in Transfusions. Medical Conditions. Burns and Shock.
Newer Concepts in the Diagnosis and Management of Diseases of the Liver. Panel discussion.

As noted in last year's report the panel discussions met with increasing favor through the opportunity they presented for participation in the program by members of the audience.

The program in the Upper Peninsula was given May 24 to 28, inclusive in the above mentioned centers in afternoon and evening sessions. The subject matter was the same with the exception that "The Differential Diagnosis and Management of Nephritis" was substi-

uted for "The Differential Diagnosis and Management of Hypertension" and the panel on "Diseases of the Liver" was omitted on account of lack of time. The attendance on the Upper Peninsula meetings has been very satisfactory and fully justifies the difficulties in travel and expense.

Intramural courses were given this year in anatomy, clinical laboratory diagnosis, diseases of the blood, diseases of the heart, electrocardiographic diagnosis, endocrine and nutritional problems, gastro-enterology, ophthalmology, otolaryngology, recent advances in therapeutics, roentgenology, and the usual personal courses.

The total attendance was as follows:

Extramural Course		
Ann Arbor	127	
Battle Creek-Kalamazoo	164	
Bay City-Saginaw	105	
Flint	95	
Grand Rapids	146	
Jackson-Lansing	139	
Mount Clemens	54	
Traverse City-Cadillac	80	
Upper Peninsula	120	
		1030
Intramural Courses		
Anatomy	22	
Clinical Laboratory Diagnosis	10	
Diseases of the Blood	17	
Diseases of the Heart	24	
Electrocardiographic Diagnosis	24	
Endocrine and Nutritional Problems of Childhood	10	
Gastroenterology	18	
Ophthalmology	49	
Otolaryngology	28	
Personal courses	137*	
Recent Advances in Therapeutics	25	
Roentgenology	10	
		374
TOTAL		1404

Comparing the attendance of 1941-42 and 1942-43 with the average attendance of the entire period of our program, it will be noted that the drop in attendance is less than the number of doctors going into the armed forces. The average of the last two years is 1,485 and that of the nine years preceding is 1,667. When consideration is given to the added responsibilities of those remaining at home, together with the increased difficulties of travel, the response of the profession to postgraduate opportunities has been much beyond what ordinarily might have been expected. It shows definitely the appreciation of the profession and the obligation of the State Society and our medical schools to continue to meet these educational needs.

Many postgraduate opportunities not included in the above summary have been made available throughout the year. A postgraduate industrial medical and surgical conference sponsored by the Committee on Industrial Health of the Michigan State Medical Society in cooperation with the Department of Postgraduate Medicine of the University of Michigan was attended by more than 400 physicians. The annual meeting of the Northern Tri-State Medical Association, of which Dr. H. H. Cummings was president, was held in Ann Arbor, with a total attendance of 540 doctors.

During the past year the Continuation School of Wayne County made a request to the Council for financial assistance in its program of postgraduate education. This matter was referred to the State Postgraduate Committee. This committee was sympathetic and felt that if such assistance were given, the Wayne program should be integrated with the state program and while primarily intended for Wayne postgraduate needs, should be made available to physicians from every part of the state so far as its facilities would permit. Upon receiving a communication from the chairman of The Council asking for a personal opinion regarding the validity of the above request, your chairman advised that the request be granted, and The Council approved. The Continuation School of Wayne County felt compelled, however, to discontinue its program for the duration because of absence in the armed forces of a large proportion of its teaching personnel. This committee deeply regrets the necessity for this action. It is keenly interested in the further development of the Wayne program, not alone for its influence upon its own members which fully justifies its continuance, but for its influence on the acceptance of the plan of clinical bedside teaching which Osler many years ago inaugurated so successfully at McGill and Johns Hopkins Universities, and which it is hoped may be developed as time goes on in the other teaching centers now included in the Michigan program. This observation leads quite naturally to the hope this committee has expressed so often that not only will the State program be carried on entirely in hospitals, but that all the hospitals of the state, with sufficient bed capacity and adequately staffed with men interested in progress in medical education, might make a worthwhile contribution in the training of candidates for the various specialties in addition to the present program of intern training. The entry of the hospitals of the State into this broader educational service would be exceedingly helpful in meeting the burden of postwar demands and go far toward raising professional standards within the hospitals. A special committee of the Society under the chairmanship of Dr. Burton R. Corbus has been studying the problem of the integration and increased participation of the hospital staffs of the State in the general educational program, and on several occasions attention has been called to this important possibility in medical education by our members.*

Our planning throughout the years has been concerned with affording the practitioner the opportunity to keep in touch with current information, thereby assisting him to render the best possible quality of service. Previous to the war the program consisted of eight days of extramural teaching each year. This now has been reduced to four days. Would it not be appropriate to return to the eight-day program as soon as the pressure on practising physicians and our teaching group is relieved? The question of a special postwar program for returning doctors has been raised. This would be difficult to the point of impracticability, for our members in service will be returning in small numbers to widely separated areas throughout the State, and in the light of our present information this will continue over a period of at least two to four years. It would seem that the best we might hope to do is to afford opportunities to our doctors in service to fit into civilian practice as quickly and as easily as possible. This might be done in at least four ways: (1) resuming our former eight-day postgraduate program; (2) educational opportunities for those desiring to move into special fields of practice; (3) enlargement of the intramural courses in our university centers of Ann Arbor and Detroit; and (4) a well-organized program at our military training center at Battle Creek in collaboration with the Medical officers stationed there, together with the national committee on postgraduate education, composed of representatives of the American Medical Association, the American College of Physicians, and the American College of Surgeons. While relatively few Michigan doctors will be in Battle Creek to receive this program, we may confidently expect that Michigan doctors wherever located will receive well-organized professional instruction through the national committee assisted by local state agencies.

At the May 13 meeting of this committee Dr. J. Mil-

*Including sixteen postgraduate students at Wayne University College of Medicine.

*Bruce, James D.: Remarks on induction into presidency of the American College of Physicians. Ann. Int. Med., p. 2199, (May) 1940.

Corbus, Burton R.: The relation of postgraduate committees to intern instruction in unaffiliated hospitals. J. Michigan M. S., p. 390, (May) 1942.

Sladen, Frank J.: The responsibility of the hospital staff in graduate medical education. Ann. Int. Med., p. 108, (July) 1941.

ton Robb, representing a committee on postgraduate education made up of officials of the American Medical Association, the American College of Physicians, and the American College of Surgeons, presented a request for a program of postgraduate instruction for the medical officers of Fort Custer and the Percy Jones General Hospital in the Battle Creek area. In response to this request the committee decided to hold the October session of our postgraduate program at either Fort Custer or the Percy Jones General Hospital rather than in one of the Battle Creek civilian hospitals as a convenience for the medical officers. Dr. Robb was given the further assurance that this committee would collaborate with the national committee and with the medical personnel of the Battle Creek military establishments in formulating and presenting any additional postgraduate instruction mutually agreed upon. While this probably will involve additional burdens upon our teaching personnel, to fail to meet this national challenge would not be in keeping with the policy of the Michigan State Medical Society throughout the years.

Respectfully submitted.
James D. Bruce, M.D., *Chairman*
A. P. Biddle, M.D.
Chas B. Drury, M.D.
C. T. Ekelund, M.D.
W. E. Fillinger, M.D.
A. C. Furstenberg, M.D.
C. L. Hess, M.D.
Edgar H. Norris, M.D.
R. H. Pino, M.D.
J. M. Robb, M.D.
J. J. Walch, M.D.
F. F. Yonkman, M.D.

ANNUAL REPORT OF THE PUBLIC RELATIONS COMMITTEE, 1942-43

This committee planned a very ambitious program of Public Relations for the laiety through the development of an active state-wide speaker's bureau in each county society. The county units were asked to supply information to be compiled into a talk on "The Physician in Wartime." There was a very encouraging response by the county societies.

It was planned to present a number of speeches throughout the State to high schools, service clubs, labor unions, women's clubs, etc. Arrangements were to be made locally by each county society public relations committee. The program was to have been developed in coöperation with the Joint Committee and its facilities.

The ever-increasing physician shortage in Michigan made it apparent that there was not enough personnel to carry out the proposed plan. The increased responsibility of private practice placed upon the physicians in the State made it impossible to develop available speakers. This phase of the plan must of necessity therefore be delayed until after the war. It is, however, worthy of consideration at that time.

We feel that the function of this committee is to assist in interpreting the work of all other committees for the benefit of physicians and laymen alike. We feel that we should be called upon by other committee chairmen to act in this capacity, and we are ready to serve in the work of really improving the relations of the medical profession with each other, also with the laity.

Respectfully submitted,
J. S. DeTar, M.D., *Chairman*
Fred R. Reed, M.D., *Vice Chairman*
C. L. Candler, M.D.
C. G. Clippert, M.D.
L. T. Henderson, M.D.
W. J. Herrington, M.D.
A. LaBine, M.D.
John J. McCann, M.D.
H. A. Pearse, M.D.
Homer Ramsdell, M.D.

ANNUAL REPORT OF POSTGRADUATE EXTENSION COMMITTEE, 1942-43

The Committee believes that the Postgraduate Endowment Fund established three years ago and being added to each year by the Society is most worthy in its objectives and should have the commendation and support of all public-minded citizens who appreciate the importance of sound medical practice.

While your Committee has not had a formal meeting there have been discussions between some of its members and with H. H. Cummings, M.D., President of the Society, as well as with some well-informed laymen. It is quite generally agreed that this is a most inauspicious time to seek financial commitments. Among the reasons for this conclusion are the constantly increasing tax load and the uncertainties due to more or less necessary restrictions upon business enterprise.

It is therefore recommended that further effort in this matter be delayed until the country as a whole enters a more settled state.

Respectfully submitted,
James D. Bruce, M.D., *Chairman*
E. I. Carr, M.D.
F. B. Miner, M.D.
J. Milton Robb, M.D.
R. H. Stevens, M.D.

ANNUAL REPORT OF COMMITTEE ON HEART AND DEGENERATIVE DISEASES, 1942-43

The Committee on Heart and Degenerative Diseases has given attention to heart disease in industry without, however, arriving at any conclusion about this problem. There is a great deal of heart disease among the older indusrial workers, but, peculiarly, it is not considered a problem in industry because the workmen do not become ill or die of heart disease while on the job in greater number than in normal times. On the other hand, the necessity of employing men ordinarily considered cardiacs is very great during the emergency period. It is hoped that after the war a very definite program for the care of the industrial worker who is a cardiac can be formulated. The Committee is still developing plans along educational lines for both the physician and the laity regarding the care of the heart in middle life. It is believed that our chief effectiveness at present will be in the educational field.

Respectfully submitted,
H. H. Riecker, M.D., *Chairman*
B. I. Johnstone, M.D.
John Littig, M.D.
Mark Marshall, M.D.
Wm. H. Marshall, M.D.
A. E. Voegelin, M.D.

ANNUAL REPORT OF COMMITTEE ON PREVENTIVE MEDICINE, 1942-43

In a year marked by tremendously increased demands made upon them, the members of the Advisory Committees have continued to give unstintingly of their time and effort in order that the work of the Preventive Medicine Committee might go forward unhampered.

While detailed reports are submitted by each of the Advisory Committees to the Preventive Medicine Committee, the outstanding accomplishments may be listed briefly as follows:

The completion of a cancer manual.

A brochure on immunization and diagnostic procedures.

Arrangements for the manufacture and distribution at low cost of a satisfactory prophylactic kit.

An outstanding conference on industrial medicine.

A brochure for the medical profession covering the subject of premarital information.

Formulation of plans for the management of the draft-rejected mentally ill.

Consideration of the problem of heart and degenerative disease in the older age groups put under strain by industry.

Improved methods of tuberculosis case finding and reporting.

A series of impressive informative radio talks.

In all of its activities, the Committee has had the wholehearted coöperation of H. Allen Moyer, M.D., State Health Commissioner, of the Michigan Tuberculosis Association, and of numerous agencies and individuals whose assistance has been invaluable.

The committee met twice during the year and the attendance was well above the average.

Respectfully submitted,

Wm. S. Reveno, M.D., *Chairman*
John Barnwell, M.D.
Hugh Beebe, M.D.
J. D. Bruce, M.D.
B. R. Corbus, M.D.
L. O. Geib, M.D.
Wm. A. Hyland, M.D.
K. E. Markuson, M.D.
F. B. Miner, M.D.
H. Allen Moyer, M.D.
H. H. Riecker, M.D.
L. W. Shaffer, M.D.
C. E. Toshach, M.D.
Frank VanSchoick, M.D.
R. W. Waggoner, M.D.

LETTERS TO THE EDITOR

WASTED MANPOWER?

Dear Doctor:

If the armed services continue with their government program for medical men this year, the winter of 1943-44 will be a cruel one for the civilian population. During the past winter, intense sacrifices were made by the profession, not even considering the giving up of rights and privileges granted them over a period of many generations. Additional risks to life and health were taken without military or civilian recognition, and none was asked or expected. During this time, Doctors of Medicine in service have reported so much waste of professional skill and training, that it seems pertinent and patriotic to question the omniscience of the surgeons general in the allocation of medical officers. The general conditions of manpower waste include the use of highly specialized practitioners in nonmedical administration, duplication of service by them, peacetime regulations interpreted by peacetime regular Army and Navy medical officers to consider polish and sparkle of greater importance than care of the sick and injured, appointment of commanding officers from the professional Army group whose only claim to administrative ability is length of service.

Many of these can be condoned since the department increased forty-fold in less than two years and in years of peace was unable to recruit the higher types of professional men in their ranks. The solution must be in the separation of activities of the professional soldiers and the citizen soldier physician who is sacrificing his position at home to help win the war. Utilize the invaluable specialized training of the first to teach and demonstrate military medium and turn over to the latter the job of caring for the sick and wounded and correlating the medical profession in civil and military life. Based on surveys made by those who are experienced in hospital administration, at least 10 per cent, and in some cases 40 per cent, of assigned officers could be returned home without serious inconvenience.

PROPOSED PROGRAM OF OBSTETRIC-PEDIATRIC CARE FOR WIVES AND INFANTS OF ENLISTED MEN IN MICHIGAN

June 17, 1943

To Every Member of the
Michigan State Medical Society
Dear Doctor:

The Michigan State Medical Society has approved a plan for submission to governmental agencies re the above subject. This action was taken by the Executive Committee of the The Council on June 16 and represented the first approval by the Michigan State Medical Society of any plan.

History.—The study of plans for Michigan began on April 15 with consideration of proposals presented by the Bureau of Maternal and Child Welfare of the Michigan Department of Health. These were submitted by the State Society to the fifty-five county medical societies on May 4. By an overwhelming vote, the county medical societies disapproved them. As a basis for further negotiation, counter-proposals were prepared by a Study Committee of the Michigan State Medical Society Council on May 19. These were accepted by the Michigan Department of Health, and were submitted to all county medical societies for their opinion. The second poll, however, again disclosed a decided disapproval of the proposals by a majority of the county societies.

Approved Plan.—The plan definitely approved by the Executive Committee of The Council on June 16, based on advice received from county societies, is as follows:

Recognizing the responsibility of government to provide the usual comfort and necessities of life to wives and dependent infants of enlisted men in our armed forces, and consistent with the desires of our county medical societies as expressed in recent polls on this question.

This Committee recomends:

1. That federal grants be made direct to wives and dependent infants of enlisted men to provide the necessities of life including medical care;
2. That such federal funds so paid to enlisted men's wives be used by the recipients as necessity requires;
3. That the Michigan State Medical Society should coöperate in a plan embodying the above principles; provided
   (a) That the program end six months after the termination of the present war;
   (b) That the physician-patient relationship on a fee basis be maintained;
   (c) That the detail of operation and administration be worked out jointly by the Michigan Department of Health and a committee from the Michigan State Medical Society; that any future plans be subject to this same condition;
4. That a letter be sent to every county medical society and to every member of the Michigan State Medical Society requesting them to postpone participation until they receive notice from the Michigan State Medical Society that final details have been agreed upon.

AMA Action.—The Michigan State Medical Society is in line with that taken by the House of Delegates of the American Medical Association, which met in Chicago, June 7-8-9, 1943.

Use of Government Blanks Not Authorized.—Despite the fact that blanks have been distributed by the Michigan Department of Health to county society secretaries,

their use is not authorized, and no approval has been given by the Michigan State Medical Society to any plan excepting the one outlined above. This is being transmitted to the Michigan Department of Health and as soon as it is accepted every MSMS member will be notified through his county medical society.

Until an official acceptance of the Michigan proposal is received, no plan which may be attempted in Michigan will received the coöperation of the Michigan State Medical Society.

In the meantime, you should continue to render the best medical care to the wives and dependent infants of soldiers, sailors, marines and those in the Coast Guard, and this can be done best through the physician-patient relationship, devoid of politics, governmental domination and red tape.

* * *

HR-2041, which would continue this federal program for the duration and six months after the war's end, is in the U. S. House of Representatives Labor Committee. The annual appropriation is set at 6,000,000.

Please contact your two Michigan Senators and your Congressman AT ONCE. Precedent for the direct grant to recipients has been established by the Social Security Board in providing recipients of Old Age Assistance with additional funds so that they may purchase necessary medical care from practitioners of their choice. No grant is made or should be made direct to the members of the medical profession.

Thank you for contacting your Congressmen; this will help to counteract the gradual intrusion of State Rights.

Fraternally yours,

Michigan State Medical Society
L. Fernald Foster, M.D.
Secretary

July 28, 1943

To every Member of the
Michigan State Medical Society,
Dear Doctor:

The following action was taken by The Council of the Michigan State Medical Society at its meeting of July 17 and was ordered transmitted to every member of the State Society.

The Council of the Michigan State Medical Society—

1. OPPOSES AND DISAPPROVES the plan for Maternal and Pediatric Care to wives and infants of enlisted men as long as payments are made direct to physicians.

The Council of the Michigan State Medical Society—

2. WILL APPROVE a plan WHEN payment is made direct to the wives of enlisted men.

The attention of every member of the State Society is invited to the fact that if he signs application blanks for the plan *as offered to date* and participates in the program, it will:

1. Encourage the development of a poor quality of obstetric-pediatric care—a condition which always follows the operation of a regimented program (governmental);
2. Establish a precedent for further extension of governmental intrusion into the private practice of medicine. (Next may come eye-ear-nose-throat, then another, and finally all the sections including Medicine and General Surgery.)
3. Commit to this type of governmental program those 1,872 members of the Michigan profession who are in military service, without giving them the opportunity to express their opinion.
4. Open the door to governmental medical service for ALL, without economic distinction or determination of need.
5. Establish a fee schedule, which tends always towards revision downwards.

To supplement its previous polls of county medical societies, The Council desires an expression of opinion from EVERY INDIVIDUAL MEMBER of the Michigan State Medical Society. Therefore, read carefully the enclosed post card, mark same, and return at once.

Any member who participates in the present governmental plan is doing so against the advice and opinion of The Council of the Michigan State Medical Society, the House of Delegates of the American Medical Association, and the Michigan State Advisory Council of Health. These groups have decided against the program of the U. S. Children's Bureau only after detailed study and consideration. By your action now, you determine the future of the private practice of medicine.

In its present form, the plan (with payment direct to physicians) is definitely SOCIALIZED MEDICINE.

Fraternally yours,

Michigan State Medical Society
THE COUNCIL,
By
L. Fernald Foster, M.D.
Secretary

1—I approve the decision of the Council of the Michigan State Medical Society, the House of Delegates of the American Medical Association, and the Michigan State Advisory Council of Health declaring that *payment direct to physicians* for obstetric-pediatric care to wives and infants of enlisted men is wrong in principle.
Yes ☐ No ☐

2—I shall refuse to sign blanks for participation in the governmental program as offered to date. Yes ☐ No ☐

Signed .....M.D.

Member.....County Medical Society.

IN MEMORIAM

Norman R. Kretzschmar of Ann Arbor was born in Detroit, October 30, 1903, and was graduated from the University of Michigan Medical School in 1926 and given a Master of Science in Medicine in 1931. Doctor Kretzschmar started his career as an Assistant in Pharmacology during 1924-25; was Instructor in Obstetrics and Gynecology from 1928 to 1931; he became Assistant Professor in 1931, and was raised to Associate in 1937. From 1935 until the fall of 1936, Doctor Kretzschmar was Associate Professor at Lying-in Hospital in Chicago. He was a member of the American Medical Association, a diplomate of the American Board of Obstetrics and Gynecology and a member of the American College of Surgeons, the Central and Michigan Associations of Obstetricians and Gynecologists. Since 1941, Doctor Kretzschmar was also engaged in private practice. He died May 5, 1943.



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MANUFACTURE OF SERUMS FOR PNEUMONIA TO STOP

Because of the small demand for serums for the treatment of pneumonia, their manufacturer by the Michigan Department of Health laboratories is discontinued as of July 1.

The supply of packaged serums on hand is adequate to meet the current demand and dispensation will be continued by all active distributing stations until the serums become outdated. Types 2, 7 and 8 become outdated early this fall and winter. Types 1, 3 and 5 will be available through the coming pneumonia season.

An adequate supply of sulfathiazole and sulfadiazine for the treatment of pneumonia is available for distribution.

MOSQUITO CONTROL AREA IN CALHOUN SUGGESTED

L. L. Williams, Jr., M.D., of Atlanta, Georgia, medical officer in charge of malaria control in war areas for the U. S. Public Health Service, has been invited by Commissioner Moyer to address a meeting of health officers and sanitarians of southern Michigan to be held in Battle Creek. Civilian and military health authorities may establish a mosquito control area in western Calhoun County to lessen the hazard of spread of the disease from soldiers returned to the Percy Jones Hospital in Battle Creek from the Southwest Pacific.

SPREAD OF SKIN RASH AMONG WORKERS HALTED

Preventive measures recommended by industrial hygiene physicians and engineers of the Michigan Department of Health are apparently effective in controlling the spread of a skin rash caused by formaldehyde resins widely used in plywood manufacturing processes. Skin irritation affecting 355 employes of plants in four western Michigan cities has threatened war contracts but no new cases have developed in recent weeks. Findings and recommendations are being offered to industry generally through a publication with nation-wide circulation among plant physicians.

Some workers develop immunity to toxic substances in the resins; other workers must be removed from all contact with them. Emphasis on cleanliness, protective garments and ointments is coupled with recommendations concerning changes in manufacturing techniques in the Department report.

LARGER TUBERCULOSIS PAYMENTS TO COUNTIES APPROVED

Beginning July 1, the State Administrative Board will approve increased payments to counties whose hospital bills for care of residents with tuberculosis are out of line with tax incomes. A special $250,000 appropriation will be available for the purpose in the next fiscal year.

Benefiting will be counties that are called on to furnish hospital care in excess of forty patient days per year per $100,000 assessed valuation. Twenty-five counties qualify for such additional assistance now. Heading the list is Houghton county whose present hospital load is 203 patient days per year per $100,000 assessed valuation.

The twenty-five counties are Gogebic, Ontonagon, Houghton, Keweenaw, Baraga, Marquette, Dickinson, Menominee, Alger, Delta, Schoolcraft, Luce and Mackinac in the upper peninsula, Antrim, Arenac, Charlevoix, Crawford, Grand Traverse, Lake, Leelanau, Manistee, Mason, Missaukee and Otsego in the upper part of the lower peninsula and Berrien County in southwestern Michigan.

Also beginning July 1, the state increases its payments to all counties to $2 per hospital day as against the $1.50 paid at present, the last legislature having increased the appropriation for the purpose to $2,650,000, a half million dollar boost. In no case will the state pay more than $3.50 for one day's hospital care.

The state health department will continue to audit all such accounts.

TUBERCULOSIS MORTALITY FIGURES FOR 1942

Tuberculosis claims most lives in Michigan among males over 40 years of age according to final 1942 figures released by the state health department. Almost twice as many deaths of tuberculosis occur among males as among females and most deaths among females occur before age thirty.

Sixty-four per cent of the 1,827 men, women and children who died of tuberculosis were males. Of these 1,173 males, tuberculosis caused most deaths in the age group fifty to sixty. Sixty-two per cent of the men who died of tuberculosis were over age forty, the disease having caused approximately as many deaths among males in their sixties as in the age group twenty to forty.

Tuberculosis deaths among females reached their peak in the age group twenty-five to twenty-nine.

SWIMMERS WARNED AGAINST TYPHOID INFECTED WATERS

Warning to swimmers to stay away from rivers or lakes where sewage is emptied and where typhoid fever can be contracted is given by the State Health Commissioner. Uncertain depths and treacherous currents, as in some sections of the St. Clair, Saginaw, Detroit and Rouge Rivers, are added hazards, as the mounting death toll among swimmers in recent weeks indicates.

Recently reported typhoid fever among school age boys and girls suggests the possibility of typhoid being transmitted through swimming in water polluted with raw sewage. Typhoid fever contracted in late August

(Continued on Page 654)

They help the physician

BLAKISTON BOOKS

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Physicians who do no laboratory work of their own find the sections on interpretation of laboratory tests ample reason for having this work. It deals with diseases of each system of the body and discusses the laboratory work required for diagnosis. Laboratory technic in detail is given in the second half of the book. A complete index of diseases with suggestions as to appropriate laboratory procedures is included. By E. E. Osgood, M.D., University of Oregon Medical School. 37 Illus. 676 Pages. $6.00.

Hughes—Practice of Medicine, 16th Edition

This book presents a concise survey of practical medicine incorporating the many new advances in diagnosis and treatment. Revised and edited by Burgess Gordon, M.D., Jefferson Medical College. 36 Illus. 791 Pages. $5.75.

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This edition contains an up-to-date presentation of all available types of laboratory procedure. By Paul W. Clough, M.D., and Mildred C. Clough, M.D., Johns Hopkins University. 208 Illus. 961 Pages. $7.00.

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A complete and authoritative study of tropical diseases and their treatment. Cosmopolitan diseases found in warm countries and diseases of tropical origin that may become endemic in temperate climates are fully presented. By Richard P. Strong, M.D., Harvard Medical School, Emeritus. 398 Illus. 1826 Pages. 2 Volumes. $21.00.

Ricci and Marr—Principles of Extraperitoneal Caesarean Section

It gives in full detail the techniques of all types of extraperitoneal caesarean section. Clear descriptions of the anatomic relationship between fascia transversalis, peritoneum and bladder in the various stages of pregnancy are given. By J. V. Ricci, M.D., New York Med. College, and J. P. Marr, M.D., Woman's Hosp., State of N. Y. 47 Illus. 224 Pages. $4.50.

Markowitz—Practical Survey of Chemistry and Metabolism of the Skin

A new approach to the study of skin diseases. It clearly shows the modification of skin composition following pathologic process. Blood chemistry, hematopoietic changes and vitamins of interest in dermatology are included. By M. Markowitz, M.D., University of Penna. Graduate Medical School. 196 Pages. $3.50.

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Gould presents the recent progress in medicine, its many specialties and related sciences in a clear, intelligible manner. New words in current use, new drugs and methods of treatment, many clinical notes and helpful cross references are included. 174 Tables. Illustrated. Rigid or Flexible Covers $7.00 Plain, $7.50 With Thumb Index.

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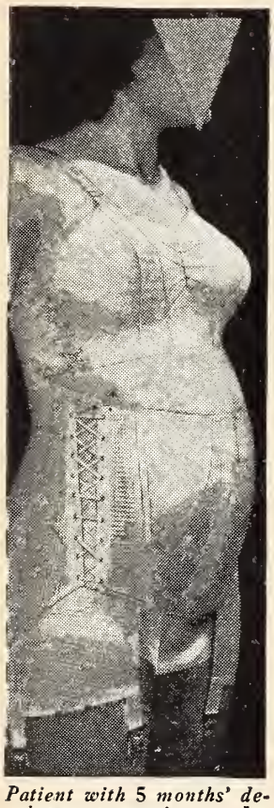
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Orthopedists tell us that they are noting an increasing number of postpartum back cases, particularly among primaparas.

Young mothers, unaccustomed to baby care and the physical exertion of home-making, are often handicapped by weakened back and abdominal muscles. Lifting of the child, bending and stooping, plus postpartum fatigue, induce back derangements.



Patient with 5 months' development wearing an Individually Designed Spencer Maternity and Breast Support. Usable after childbirth, too!

By wearing a Spencer Support during pregnancy, designed especially for her, the patient is protected against undue fatigue and back strain before and after childbirth.

A light, flexible Spencer Maternity Support will be individually designed for your patient. It will provide support for lower abdomen, with freedom at upper abdomen; improve posture; relieve pressure; prevent and relieve backache and nausea when not pathological. Designed of non-elastic material. *Guaranteed* never to lose its shape. Easily adjusted to increasing development.

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.....M. D.

Address H-8

of last year by three girls was traced to swimming in Lake St. Clair near the outfall of the Nine Mile Road sewer in Macomb County.

Other places considered unsafe in recent years because of pollution conditions which have not been corrected, as reported by Milton P. Adams of the Stream Control Commission, are:

Clinton River from Red Run to Lake St. Clair.

Lake St. Clair in the vicinity of all sewer or drain outlets.

St. Clair River at most points in or below Port Huron.

Detroit River, throughout length of city and extending to Lake Erie.

Grand River below Grand Rapids.

Cheboygan River, in and below Cheboygan.

Thunder Bay River in Alpena.

St. Joseph River, particularly the lower section from Indiana state line to Lake Michigan.

Kalamazoo River, particularly the sections from Kalamazoo to Allegan and from Saugatuck to Lake Michigan.

Saginaw River, from south limits of Saginaw to Saginaw Bay.

Fremont Lake, Newaygo County (in vicinity of Darling Creek).

Sections of lakes or streams anywhere which receive the flow of untreated or inadequately treated sewage.

FEWER INFECTED WORKERS SEEK ENTRY INTO STATE

A five-year campaign of state health authorities to prevent tuberculous beet sugar workers from entering Michigan is getting results. A marked decrease is reported in numbers of infected migrant workers presenting themselves for physical examinations at offices in San Antonio and Dallas, staffed by the Michigan Department of Health.

Reflecting wartime competition for labor, fewer prospective employes of beet sugar companies were examined in the Texas offices in the seven-week period they were operated. Tuberculous individuals weeded out in previous seasons only infrequently presented themselves for reëxamination.

Mexican workers who have become citizens, and members of their families, were examined in the Texas cities. The U. S. Public Health Service is conducting similar examinations of Mexican nationals at border points.

Fluoroscopy is used to find active tuberculous cases. Of 7,311 prospective workers examined in Texas in recent weeks, seventy-eight were turned back. In the last five years, department physicians have examined 38,894 persons and turned back 681 cases of active pulmonary tuberculosis.

REFRIGERATION FOR SKIN GRAFTING

"Refrigeration anesthesia for skin grafting opens a new field for the use of reduced temperatures in surgery," Lieutenant Harry E. Mock says. Two hours before operation, one or more uncovered ice bags are applied directly to the area from which the skin is to be taken. . . ."—*J.A.M.A.*, June 26, 1943.

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Stainless, greaseless, and clinically non-irritating and non-allergic, it may safely be prescribed for continued home use by the patient. Although it is a tar derivative, and maintains the therapeutic properties inherent in the base tars, it is entirely free from the "tarry" odor associated with ordinary tar preparations.



Carried in a bland vanishing cream that is rubbed into the skin without leaving a greasy film and so requires no dressing, Tarbonis Cream wins rapid patient acceptance.

Many medical directors of vital Michigan defense plants have found Tarbonis Cream most effective in combatting industrial dermatitis.

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Woman's Auxiliary

CALHOUN COUNTY

A unique service was rendered by the Auxiliary to the Calhoun County Medical Society when they organized the County Hospital Auxiliary, over such surmounting difficulties of organization, as war time transportation problems and other stumbling blocks, which always beset the path of new organizations. Members of the Auxiliary volunteer their services regularly one day each month.

HOUGHTON-BARAGA-KEWEENAW COUNTY

Eighteen members and one guest of the auxiliary to the Houghton-Baraga-Keweenaw County Medical Society met the Miscowaubik club for dinner which preceded the regular monthly meeting. Immediately after dinner, the program chairman of the day, Mrs. A. S. Aldrich, presented Lt. Betty Roche of the Army Medical Corps, who spoke informally about the camp life of the WACs at Des Moines, Iowa.

The Auxiliary has endeavored to carry out the purpose of all medical auxiliaries to promote health education among the laity. In view of the fact that tuberculosis is so prevalent in this part of the state, the auxiliary since its inception in 1939 has taken the needs and the necessities of the Copper County Sanatorium and patients as its principal objective. During the short existence of the organization, much has been done towards this goal, and the past year was no exception. The benefit Silver Tea held last July netted the Sanatorium fund of the auxiliary $123. From this amount, $100 was applied to the bill for the dental equipment, which the auxiliary purchased for the institution at a cost of $600. Recently, the group has undertaken the Occupational Rehabilitation Library for the hospitalized T.B. patients.

JACKSON COUNTY

President's night of the Jackson County Medical auxiliary honoring Mrs. E. O. Leahy was held Tuesday evening in Hotel Hayes. Colonial corsages marked places for 10 guests at the speaker's table at the dinner. Apple blossoms and geraniums decorated the other dinner tables, the decorations in charge of Mrs. M. N. Stewart, Mrs. Randall Cooley, Mrs. Miar McLaughlin and Mrs. John C. Smith. Mrs. A. M. Shaeffer was dinner chairman.

The program was opened with a candle lighting ceremony conducted by Mrs. T. E. Hackett, program chairman. Mrs. W. H. Lake was pianist accompanist for the singing of "The Star-Spangled Banner."

Greetings from the state auxiliary president, Mrs. Gordon L. Willoughby, and Mrs. William B. Hubbard, state secretary, both of Flint, was followed by a history of the local auxiliary by Mrs. J. H. Myers. A review of "Log Cabin Lady" was given by Mrs. E. G. Wilson.

At the conclusion of the program, Mrs. E. O. Leahy, president, presented the gavel to Mrs. M. D. Wertenberger, president for 1943-44

SAGINAW COUNTY

Officers of the Saginaw County Medical Auxiliary were elected at a luncheon meeting at Wuerthners Wishing Well tea room. Those elected were: President, Mrs. James H. Curtis; president-elect, Mrs. William G. Kerr; secretary, Mrs. Frank J. Busch; treasurer, Mrs. Allan K. Cameron.

Mrs. Victor O. Mietens described her experience in Casablanca. A résumé of the auxiliary's activities during the past year was presented by Mrs. Cecil W. Ely, retiring president.

WAYNE COUNTY

The annual luncheon meeting of the Women's Auxiliary to the Wayne County Medical Society was held in the David Whitney House, the headquarters of the society.

Mrs. T. Grover Amos took over the gavel as president of the organization and Mrs. Herman Scarney was named president-elect. Other officers elected were Mrs. William Sherman and Mrs. L. Paul Sonda, vice presidents; Mrs. W. Wilbur MacGregor, recording secretary; Mrs. Richard Connelly, corresponding secretary; Mrs. Roland Athay, treasurer; Mrs. William MacAlonan, financial secretary; Mrs. Elmer Whitney, custodian, and Mrs. H. Walter Reed, historian.

Speaker for the occasion was Glen Staines, owner of the Ponchartrain kennels for training Pathfinder dogs. His speech on the merits of Pathfinder dogs was appropriate, for the auxiliary has recently completed its year's project of raising enough money to purchase such a dog for a blind soldier returning from war.

WEXFORD COUNTY

Mrs. C. E. Merritt of Manton entertained members of the Auxiliary of the Wexford Medical society at her cottage at Fife Lake, Thursday evening. Dinner was served at 6:30 from tables decorated with spring flowers. Mrs. Gordon Tornberg assisted the hostess.

Mrs. W. J. Smith was elected president of the group at the business meeting which followed dinner, succeeding Mrs. Merritt. Mrs. H. J. Masselnink of McBain was chosen president-elect, Mrs. J. F. Gruber, vice president; Mrs. Michael Murphy re-elected secretary and historian; Mrs. E. A. McManus of Mesick, re-elected treasurer; Mrs. T. R. Laughbaum of Lake City, corresponding secretary and Mrs. Benton Holm, membership chairman.

A report of the activities of the club year was given, most of the group's efforts being given to Red Cross sewing, it was brought out. An announcement was made of the Auxiliary convention to be held in Chicago in June, and of the next meeting of the local society to be held at the home of Mrs. Masseling in McBain in June. The women voted to extend an invitation to membership to all wives of the medical profession in Osceola, Missaukee and Wexford Counties.

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COUNTY AND PERSONAL ACTIVITIES

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Branch County—James Bailey, M.D., Secretary
Cass County—K. C. Pierece, M.D., Secretary
Chippewa-Machinac—David Littlejohn, M.D., Secy.
Clinton County—T.Y. Ho, M.D., Secretary
Dickinson-Iron—E. B. Anderson, M.D., Secy.
Eaton County—L. G. Sevener, M.D., Secretary
Gogebic County—F. L. S. Reynolds, M.D., Secy.
Huron County—J. Bates Henderson, M.D., Secretary
Jackson County—H. W. Porter, M.D., Secy.
Lapeer County—H. M. Best, M.D., Secretary
Livingston County—Ray Duffy, M.D., Secretary
Luce County—Sidney Franklin, M.D., Secretary
Manistee County—C. L. Grant, M.D., Secretary
Mecosta-Osceola-Lake—John A. White, M.D., Secretary
Menominee County—Wm. S. Jones, M.D., Secy.
Midland County—H. H. Gay, M.D., Secretary
Muskegon County—Helen Barnard, M.D., Secy.
Newaygo County—W. H. Barnum, M.D., Secy.
Oceana County—W. Heard, M.D., Secretary
Ontonagon County—W. F. Strong, M.D., Secy.
Saginaw County—R. S. Ryan, M.D., Secretary
Sanilac County—E. W. Blanchard, M.D., Secy.
Shiawassee County—I. W. Greene, M.D., Secy.
St. Clair County—A. L. Callery, M.D., Secy.
St. Joseph County—R. J. Fortner, M.D., Secy.
Wexford-Missaukee—B. A. Holm, M.D., Secy.

The above medical societies have certified 1943 dues for every member of their respective societies.

Congratulations, members of the 100 Per Cent Club!

Postgraduate Credits are given to every member who attends the 1943 Postgraduate Conference on War Medicine, the 78th annual session of the Michigan State Medical Society, Wednesday, Thursday, Friday, September 22, 23, 24, in Detroit.

* * *

David H. Burley, M.D., of Almont, completed fifty years as a practitioner in Lapeer County on June 21. He started practicing in that city in 1893, after graduating from the Detroit College of Medicine. Dr. Burley is also a registered pharmacist.

* * *

"EVERY MEMBER OF THE MICHIGAN STATE MEDICAL SOCIETY IS INVITED AND URGED TO ATTEND THE MEETINGS OF THE HOUSE OF DELEGATES."—P. L. Ledwidge, M.D., Speaker.

The American Congress of Physical Therapy will hold its twenty-second annual session September 8, 9, 10 and 11 at the Palmer House, Chicago. For full information and program write the Congress at 30 North Michigan Avenue, Chicago, Illinois.

* * *

The Tuscola County Medical Society is sponsoring an exhibit, through the coöperation of the American Medical Association, at the Tuscola Fair in August. The exhibits, outlining medical progress, should be an excellent experiment in public relations.

* * *

Frank J. Moloney, M.D., of Sault Ste. Marie, was given a city-wide testimonial in Baraga Auditorium Thursday, June 17, upon his completion of forty-four years in the practice of medicine at the Sault. A gold ring was presented to him by his friends, who congratulated him upon a long happy and useful life.

* * *

State Society Dues—Nine State Societies have dues ranging from $15.00 to $29.00. Wisconsin heads the list with $29.00 per annum; Oregon is next with $25.00. Other states where increased service and activities have necessitated larger dues are: Arizona, California, Colorado, Connecticut, Idaho, Kansas and Washington.

* * *

Albert A. Hughes, M.D., Detroit, a long time member of the Wayne County and Michigan State Medical Societies, has been elected Most Worshipful Grand Master of Michigan Masonry. Doctor Hughes is head of Michigan's 114,000 Free and Accepted Masons.

Congratulations, Doctor Hughes.

* * *

"Unjust Criticism" is the title of a refreshing editorial which appeared in the *Bulletin of the Genesee County Medical Society,* May 25 issue. It outlines the antics of two typical groups who decry the "high cost" of medical care but who demand luxurious service even in wartime.

* * *

S. W. Insley, M.D., Wm. S. Reveno, M.D., and Lawrence Reynolds, M.D., have been appointed as Editors of the *Detroit Medical News* (Bulletin of the Wayne County Medical Society) for the ensuing year.

Congratulations, and best wishes for full success in this important assignment!

The Wagner-Murray-Dingell Social Security Bill (S. 1161) was introduced into the Congress on June 3. An analysis of this Social Security Plan, including a program of complete socialized medicine, appears in *J.A.M.A.,* June 26, page 609.

Co-introducer John B. Dingell is representative of the 15th District of Michigan (Wards 10, 12, 14, 16 of Detroit).

Michigan Medical Service. The Fourth Annual Meeting of the Michigan Medical Service Membership will be held Tuesday, September 21, at 2 p.m. in the Ballroom of the Statler Hotel, Detroit.

Members of Michigan Medical Service are all the members of the MSMS House of Delegates plus the Directors of Michigan Medical Service. The Officers' Reports and Election of Directors will be on the Agenda of the Annual Meeting.

* * *

The Michigan Pathological Society held its bimonthly meeting at Bronson Methodist Hospital, Kalamazoo, on June 12. The subject of the meeting was a seminar on "Diseases caused by parasites including fungi and higher bacteria." Case presentations were given by Drs. B. E. Stofer, D. H. Kaump, W. W. Zuelzer, D. C. Beaver, G. Steiner, W. L. Brosius, J. G. Christopher, and F. W Hartman of Detroit, E. F. Ducey of Minneapolis, T. L. Ramsey of Toledo, H. E. Cope of Lansing, M. O. Alexander of Grand Rapids, R. J. Parsons of Ann Arbor, H. R. Prentice of Kalamazoo, and S. E. Gould of Eloise. A number of medical officers from Ft. Custer were guests of the Society.

* * *

DIRECTOR SOUGHT FOR WAYNE COUNTY HEALTH DEPARTMENT

The Civil Service Commission of Wayne County announced in June that applications were being accepted for the position of director of the recently established county department of health. The salary will be $7,000 a year to start.

* * *

COUNCIL AND COMMITTEE MEETINGS

June 23, 1943—Tuberculosis Control Committee.
June 23, 1943—Medical Preparedness Committtee.
July 16-17, 1943—The Council.

ANNUAL SESSION INFORMATION

DIRECTORY

Headquarters .....Statler Hotel, Detroit
Registration .....Ballroom Floor, Statler Hotel
Telephone: Cherry 6000
General Assemblies .....Ballroom, Statler Hotel
MSMS Hospitality Booth Opposite Registration Desk, Statler Hotel
Exhibits .....Ballroom Floor, Statler Hotel
Publicity, Press Room.....Parlor C, Statler Hotel
Women's Auxiliary, Headquarters and Registration .....Statler Hotel

* * *

The Committee Organization Luncheon, a meeting of Michigan State Medical Society Chairmen appointed by President-elect Claud R. Keyport, M.D., to serve during the year 1943-44, will be held Wednesday, September 22, in Parlor D, Statler Hotel, Detroit, 12:00 noon to 1:30 p.m.

* * *

Register at Every Booth—there is something new for you in the interesting exhibit of 60 spaces. Stop and show your appreciation of the exhibitors' support in making the Postgraduate Conference possible.

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MEDICINE—Two Weeks' Intensive Course starting October 4. Two Weeks' Course in Gastro-Enterology starting October 18.

FRACTURES & TRAUMATIC SURGERY—Two Weeks' Intensive Course starting October 18.

GYNECOLOGY—Two Weeks' Intensive Course starting October 18. Clinical and Diagnostic Courses.

OBSTETRICS—Two Weeks' Intensive Course starting October 4.

OPHTHALMOLOGY—Two Weeks' Intensive Course starting September 27. Course in Refraction Methods, October 11.

OTOLARYNGOLOGY—Two Weeks' Intensive Course starting September 13.

ROENTGENOLOGY—Courses in X-ray Interpretation, Fluoroscopy, Deep X-ray Therapy every two weeks.

UROLOGY—Two Weeks' Course and One-month Course available every two weeks.

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The above "come-on" in the shape of a postal card was received by a number of Doctors of Medicine recently. The outfit is an advertising optical house with headquarters in Chicago, well known to Better Business Bureaus in Michigan and throughout the Middle West. A firm of this type will gladly pay a monthly stipend for the use of a reputable practitioner's name!

* * *

1. *Who administers the Social Security Act?*

The Social Security Board is a component of the Federal Security Agency, being one of several bureaus under Federal Security Administrator Paul W. McNutt. There are three members of the Social Security Board, all appointed by President Roosevelt for terms of six years. These members are A. J. Altmeyer, Chairman, Miss E. S. Woodward, and George E. Bigge.

2. *How does the Social Security Board operate?*

There are six operating bureaus as follows:

Bureau of Old-Age and Survivors' Insurance

Bureau of Employment Security (Unemployment Insurance)

Bureau of Public Assistance

Bureau of Accounts and Audits

Bureau of Research and Statistics

Informational Service

The first three of these bureaus are service units. The next two are administrative. The last is the publicity bureau, which handles propaganda.—*Insurance Economics Society of America.*

* * *

Guest Golf—The Chairman of the Detroit Committee has arranged that Michigan State Medical Society members play at all Country Clubs in the Detroit District upon presentation of their Michigan State Medical Society membership cards and payment of the greens fees.

During the War, the Michigan State Medical Society golf tournaments are not being held.

* * *

YOUR FRIENDS IN THE EXHIBIT HAVE NEW IDEAS IN SERVICE AND RECENT IMPROVEMENTS IN EQUIPMENT.

THE DOCTOR'S LIBRARY

Acknowledgment of all books received will be made in this column and this will be deemed by us as a full compensation of those sending them. A selection will be made for review, as expedient.

YEAR BOOK OF INDUSTRIAL AND ORTHOPEDIC SURGERY. Edited by Charles E. Painter, M.D., Orthopedic Surgeon to the Massachusetts Women's Hospital and Beth Israel Hospital, Boston. Chicago: The Year Book Publishers, Inc., 1942. Price $3.00.

The yearbook this year is strongly colored by the war surgery. It is an extensive analysis of the literature of the past year, covering everything of value in industrial and orthopedic surgery. New is the work on magnesium cysts and conditions resulting from work with the new magnesium-aluminum alloys. Chemical gas gangrene is reported, and may be a significant factor with four hundred million pounds of metallic magnesium produced. The book is profusely illustrated and well edited.

A GUIDE TO PRACTICAL NUTRITION. A series of articles on nutrition, sponsored by the Committee on Nutrition and Deficiency of The Philadelphia County Medical Society. Edited for the Committee by Michael G. Wohl, M.D., and John H. Willard, M.D. Reprinted from Philadelphia Medicine, 1941-1942. Paper.

The student or the practitioner looking for clarity of a profusion of information will find here authoritative discussion on carbohydrates, fats and minerals in the diet. Everyday diets, foods, amounts taken and special values such as minerals, proteins, vitamins, and special diets in pregnancy are discussed. The vitamin deficiencies and the various important vitamins are rationalized. Nutrition as a war problem closes the book, except for an appendix, which gives tables and analyses of vitamins, foods, food groups, et cetera. This is a very handy reference, consolidating into ninety-eight pages much material otherwise rather scattered and difficult for the general man to reach.

ATLAS OF OBSTETRIC TECHNIC. By Paul Titus, M.D. Obstetrician and Gynecologist to the St. Margaret Memorial Hospital, Pittsburgh; Secretary, American Board of Obstetrics and Gynecology. Illustrations by E. M. Shackelford Medical Illustrator, John C. Oliver Memorial Research Foundation, St. Margaret Memorial Hospital, Pittsburgh. St. Louis: The C. V. Mosby Company. 1943. Price $7.00.

Operative obstetrics is taught in this book by concise descriptions and unusually enlightening illustrations, both photographs and schematic drawings. Various stages of procedures are carefully given. Normal delivery, preparations, draping, minor operations, pelvimetry, major operations—are first considered. The obstetric techniques for spontaneous delivery, inductions of labor, forceps, version and breach delivery are described and profusely illustrated. The management of injuries to the birth canal and the section on cesarean section are complete. The section on mutilating operations is brief, and advisedly so, as such operations are used much less frequently now than was formerly the case. The postpartum procedure is covered.

The book is well prepared, a beautiful illustration of the bookmaker's art. The text is clear and is set off by an outstanding artist.

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YOUR ARTHRITIS: WHAT YOU CAN DO ABOUT IT. By Alfred E. Phelps, M.D., With an introduction by R. Garfield Snyder, M.D., Illustrations by James MacDonald. New York: William Morrow and Company, 1943. Price $2.00.

Dr. Phelps has written a very readable little book primarily for the patient suffering from arthritis. It is designed to make the affliction more understandable and to caution the patient so he will coöperate with his physician in his treatment and thus get the most relief possible. Rheumatism is the most prevalent of the chronic diseases and one upon which too little research has been done. The author discusses etiology, focal infections, causes of pain and posture, a chapter is given to treatment and another to prevention.

The book should help the over-worked and harassed doctor, by explaining and thus reassuring the patient.

UROLOGY IN GENERAL PRACTICE. By Nelse F. Ockerblad, B.S., M.D., F.A.C.S., Professor of Clinical Urology, University of Kansas School of Medicine; Senior Attending Urologist to St. Luke's Hospital; Consulting Urologist to the Children's Mercy Hospital, Kansas City, Mo.; Diplomate of the American Board of Urology. Chicago: The Yearbook Publishers, Inc., 1943. Price $4.00.

This book is a handy teaching manual covering the field of urology in small textbook size and giving a thorough grounding, outlining diagnosis and treatment. It was written especially for teaching "the specialty to medical students and to interpret it to the profession in general." The manual is intended also for the use of the general doctor who first sees and treats urological cases. It is well written, well illustrated and well arranged.

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THE ESSENTIALS OF SYPHILOLOGY. By Rudolph H. Kampmeier, A.B., M.D., Associate Professor of Medicine, Vanderbilt University School of Medicine; in Charge of the Syphilis Clinic and Visiting Physician to Vanderbilt University Hospital. With chapters by Alvin E. Keller, M.D., and J. Cyril Peterson, M.D. 87 illustrations. Philadelphia: J. B. Lippincott Company, 1943. Price $5.00.

This book fills a need for a concise treatise on syphilis for the general practitioner of medicine. It is the outgrowth of the author's experience of several years conducting short postgraduate courses. It presents syphilis as a disease of the whole body. Extensive discussion of differential diagnosis has been limited. The book is well written, has good illustrations, and will be a very handy and ready reference for the busy practitioner. An excellent book.

A MANUAL OF CLINICAL THERAPEUTICS. A Guide for Students and Practitioners. By Windsor C. Cutting, M.D., Associate Professor of Therapeutics, Stanford University School of Medicine, San Francisco, California. Philadelphia and London: W. B. Saunders Company, 1943. Price $4.50.

This manual is written to be a compact and practical guide for students, house officers, practitioners of general medicine, and those in the services. The specific treatment of not only the diseases most commonly met in general practice is given, but also of tropical diseases, as they are becoming of more general importance. Two chapters are given to general problems; infections, mycotic, protozoal and metazoal infections are worth a chapter each. Nutritional diseases, vitamin deficiencies, endocrine, and allergic diseases have their chapters. The gamut of diseases is divided into those of the various systems, tracts, glands, et cetera. In each case there is a short, clear discussion of the diseases, general measures of treatments, and specific measures, with a sentence or two on prevention. There is a valuable appendix of eleven chapters.

→ A different approach to the history of man's fight against disease is taken by one of America's leaders in that fight, Charles-Edward A. Winslow, in THE CONQUEST OF EPIDEMIC DISEASE *(Princeton Univ. Press,* $4). Professor Winslow tells the story of the ideas that changed the battle lines against plague, cholera, smallpox and the rest from propitiation of the demons to vaccination, water purification and sanitary sewage disposal.—*Science News Letter,* July 31, 1943.

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THE MICHIGAN POSTGRADUATE PROGRAM FOR GRADUATES IN MEDICINE AUTUMN, 1943

The Michigan State Medical Society, in coöperation with the University of Michigan Medical School, Wayne University College of Medicine, the Michigan Department of Health, and the Wayne County Medical Society, announces the extramural postgraduate courses for the autumn, 1943.

Centers	Dates
Ann Arbor	October 12 and November 9
Battle Creek	October 5 and 19
Flint	October 12 and 26
Grand Rapids	October 12 and November 9
Lansing	October 7 and 14
Mt. Clemens	October 13 and 27
Saginaw	October 19 and November 16
Traverse City	October 8 and November 12

Subjects

First Day:

Lecture: Recent Advances in the Management of Cardiac Irregularities.
Lecture: Syphilis. Serological and Clinical Findings in Relation to Treatment.
Panel Discussion: Evaluation of the Surgical Risk.

Second Day:

Lecture: Fatigue. Its Increasing Significance in Wartime.
Lecture: Practical Problems in the Management of the Menopause.
Panel Discussion: Newer Drugs and their Uses in Practice.

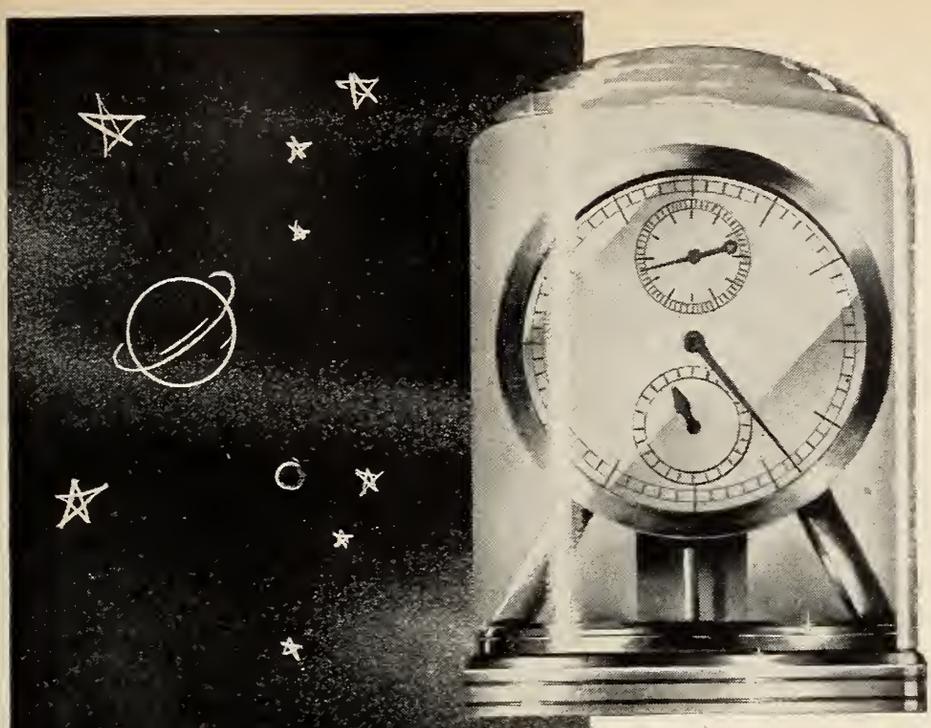
Intramural Course

Electrocardiographic Diagnosis.....November 1-6, inclusive
University Hospital, Ann Arbor

The detailed program will be mailed to the physicians of the State early in the autumn.

For further information, address:

Committee on Postgraduate Education
Room 2040, University Hospital
Ann Arbor, Michigan



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WAR BULLETINS

ARMED FORCES MUST HAVE 6,000 MORE PHYSICIANS BY JANUARY 1

The Armed forces must have 6,000 additional physicians by Jan. 1, 1944, *The Journal of the American Medical Association* reports in an editorial in its August 7 issue. *The Journal* says:

"At a conference of the Directing Board of the Procurement and Assignment Service for Physicians, Dentists and Veterinarians, held on July 31, with the War Participation Committee of the American Medical Association and in the presence of Mr. Paul V. McNutt, chairman of the War Manpower Commission and representatives of the Army and Navy medical departments and the Public Health Service, it became apparent that the medical profession must produce toward the winning of the war an additional six thousand physicians for the armed forces before Jan. 1, 1944. Pursuant to a realization of this objective a directive has gone to the generals in command of the various service commands authorizing them to induct into the service physicians between the ages of 38 and 45 who have been declared available by the Directing Board of the Procurement and Assignment Service for Physicians, Dentists and Veterinarians and who are otherwise subject to Selective Service.

"The needs of the armed forces are real. The members of the War Participation Committee raised with the representatives of the various governmental agencies all the questions that have from time to time challenged the need; the challenge seems to have been met effectively. Indeed, the intimation was made clear that the needs of the armed forces will be met by specific regulations of the Selective Service Administration or the enactment of necessary legislation if required. All physicians up to 45 years of age who have been indicated as available have therefore placed on them now the responsibility for an immediate decision as to their enlistment with the armed forces. The need is so positive that questions of essentiality of men in positions of teaching and research and in industrial medicine are likely to be rigidly reviewed in the near future with a view to extracting from civilian life every one that can be spared.

"As the war continues and intensifies new needs for the services of the medical profession become apparent. An army in motion and one engaged in the kind of aggressive combat that now concerns our armed forces needs physicians in even greater numbers than have heretofore been demanded. Many thousands of interned aliens and prisoners are now the burden of the United States and must be given medical care.

"If there is any physician who still hesitates under these circumstances, he should realize the added advantage to him of accepting now the commission that is proffered. Should it become necessary in the near future, as seems quite likely, to enlist new activity by the Selective Service Administration and the Officers' Procurement Service to bring in the six thousand physicians that are so certainly required, those recruited by that technique will inevitably begin their service with the minimum commission that is offered, namely that of first lieutenant. Until that technique is installed, the men of special competence and of years beyond those of the recent graduate have the assurance of careful consideration and a commission more nearly in accord with age and experience.

"The call here made has the approval of the Directing Board of the Procurement and Assignment Service and of the War Participation Committee of the American Medical Association. The medical profession may well be proud of the fact that it has been the only group given, by directive of the President, the responsibility of maintaining service in civilian life and at the same time supplying the needs of the armed forces. Let us not fail in meeting fully the trust that has been placed upon us."—Published by request of AMA.

NURSING DIVISION OF P & A SERVICE

The Nursing Supply and Distribution Unit of the War Manpower Commission has been made the Nursing Division of the Commission's Procurement and Assignment Service, Paul V. McNutt, Chairman of the Commission, announced Tuesday, July 27, 1943.

"The objectives of the Nursing Division," Mr. McNutt explained, "are the same as those divisions of the Procurement and Assignment Service now dealing with the dentist, veterinary, physician, and sanitary engineer for their professions. They involve the recruitment of sufficient nurses to meet the needs of the Armed Forces and the provision of minimum adequate nursing care for the civilian population, non-military governmental agencies, and industry."

Recommendations regarding the operation of the nursing division will be made to the Directing Board of Procurement and Assignment Service, headed by Dr. Frank H. Lahey, of Boston, by a Nursing Advisory Committee. The Nursing Division is represented on all the present advisory committees to the Directing Board that are concerned with problems that affect nurses. Miss Katherine Tucker, Philadelphia, Pa., and Miss Laura Grant, New Haven, Conn., have been appointed to the Directing Board.

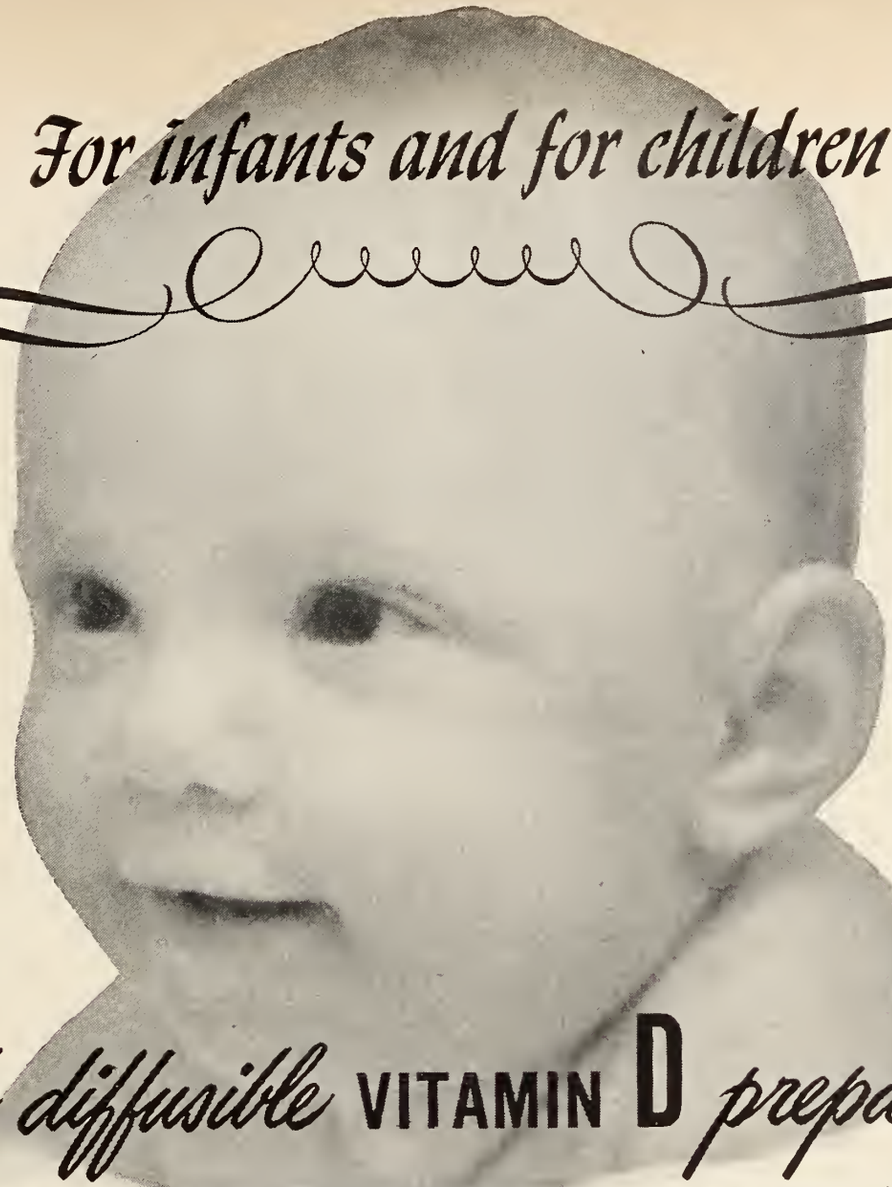
Miss L. Louise Baker has been named an Assistant Executive Officer of the Procurement and Assignment Service, to work under the general direction of the Directing Board and Dr. Maxwell Lapham, Executive Officer. She will have the responsibility of carrying out the functions of the Nursing Division and will be assisted by Miss Ruth A. Heintzelman. The already existing technical, clerical and statistical sections of the Central Office of Procurement and Assignment Service will be utilized and four nurse consultants will be added to the staff to supervise the work in the field.

The activities of the Nursing Division in the field will be carried out by separate State and local committees. The Supply and Distribution Committee of the State Nursing Councils for War Service, representing the various nursing organizations in each State and serving without compensation, will act as the State Committee for Nurses for the Procurement and Assignment Service and the Local Nursing Council for War Service will act as the local committee in each community. Both State and Local Committees will function independently of but in coöperation with the State Committees for Physicians of the Procurement and Assignment Service.

F. I. Van Wagnen, Capt. M.C. writes from Louisiana: "Having read recently of the details for the proposed plan for national socialized medicine, I have decided that it is high time to apply for membership in the State Medical Society. During the brief interval between my internship and entering military service, I had little opportunity to apply for membership in the County or State Society."

Dr. Van Wagnen's home is Jackson, Michigan.

For infants and for children



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DRISDOL in Propylene Glycol makes it possible to secure the benefits obtainable from combining vitamin D with the daily milk ration. This preparation is simple, convenient and easy to use, and relatively little is required for prophylaxis and treatment of rickets—*only two drops daily.*

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FELLOWS AND ASSOCIATE FELLOWS IN POSTGRADUATE MEDICAL EDUCATION

The State Society congratulates the following Doctors of Medicine on their successful completion of the formal continuation work arranged by the MSMS Committee on Postgraduate Medical Education. Certificates of award will be mailed to all Fellows and Associate Fellows shortly after the 1943 War Conference in Detroit —the State Society's 78th Annual Session.

The following Doctors of Medicine are eligible for certificates of Fellowship in Postgraduate Education, Michigan State Medical Society for 1943:

Florence D. Ames, M.D., Monroe; Robert J. Armstrong, M.D., Kalamazoo, Michigan.

Abel J. Baker, M.D., Grand Rapids; George M. Baker, M.D., Parma; Henry M. Blackburn, M.D., Grand Rapids; Harry A. Barbour, M.D., Mayville; Alvin T. Bonathan, M.D., Flint; DeVere R. Boyd, M.D., Muskegon; Friederich P. Brender, M.D., Frankenmuth; James S. Brotherhood, M.D., Grand Rapids; Jay J. Brownson, M.D., Kingsley; Eugene T. Brunson, M.D., Ganges; Frederick J. Burt, M.D., Holly; Benjamin B. Bushong, M.D., Traverse City.

W. Earle Chapman, M.D., Cheboygan; Earl O. Cilley, M.D., Grand Rapids; Clifford P. Clark, M.D., Flint; Corwin S. Clarke, M.D., Jackson; Wayne A. Cochrane, M.D., Jackson; Thaddeus S. Conover, M.D., Flint; Raymond R. Cook, M.D., Akron; Michael E. Cuncannan, M.D., Grand Rapids.

Harold J. Damstra, M.D., Grand Rapids.

William H. Enders, M.D., Jackson.

Ward S. Ferguson, M.D., Grand Rapids; Wells B. Fillinger, M.D., Ovid.

Louis W. Gerstner, M.D., Kalamazoo; John R. Giffen, M.D., Bangor; Benjamin T. Goodfellow, M.D., Flint; Lee O. Grant, M.D., Grand Rapids; Charles A. Groomes, M.D., Bay City; Isadore H. Gutow, M.D., Flint.

Charles W. Heald, M.D., Battle Creek; Colonel R. Henry, M.D., Ferndale; Eustace G. Hester, M.D., Saginaw; William G. Hoebeke, M.D., Kalamazoo; Benjamin G. Holtom, M.D., Battle Creek; Orrin D. Hudnutt, M.D., Plainwell; Clare C. Huggett, M.D., Lansing.

William S. Jones, M.D., Menominee.

Lee E. Kelsey, M.D., Lakeview; Claude R. Keyport, M.D., Grayling.

Chester A. E. Lund, M.D., Middleville.

James P. McConkie, M.D., Birmingham; Oscar W. McKenna, M.D., Flint; John H. McMillan, M.D., Monroe.

Harlen MacMullen, M.D., Manistee; William H. Marshall, M.D., Flint; John G. Maurer, M.D., Saginaw; Michael J. Medvezky, M.D., Bay City; Sair C. Moore, M.D., Cadillac.

Ward H. Norconk, M.D., Bear Lake.

Mark F. Osterlin, M.D., Traverse City.

Emory M. Paine, M.D., Grand Ledge; Frank A. Poole, M.D., Saginaw; George R. Pray, M.D., Jackson.

Homer A. Ramsdell, M.D., Manistee; Herbert E. Randall, M.D., Flint; Arthur J. Roberts, M.D., Jackson.

Joseph N. Scher, M.D., Mount Clemens; Theophile E. Schmidt, M.D., Jackson; William Scholten, M.D., Kalamazoo; Robert D. Scott, M.D., Flint; Leighton O. Shantz, M.D., Flint; Eugene C. Smith, M.D., Flint; Albert E. Stickley, M.D., Coopersville; Percival C. Strauss, M.D., Lansing; Clayton K. Stroup, M.D., Flint; Gerhardus J. Stuart, M.D., Grand Rapids; Cullen E. Sugg, M.D., Grand Rapids.

Paul R. Urmston, M.D., Bay City.

Elijah Van Camp, M.D., Battle Creek; Jay D. Vyn, M.D., Grand Rapids.

Herbert O. Westervelt, M.D., Benton Harbor; Joseph B. Whinery, M.D., Grand Rapids; Ernest A. Wittwer, M.D., Bay City; George H. Wood, M.D., Reed City.

* * *

The following Doctors of Medicine are eligible for Certificates of Associate Fellowship, 1943:

Aaron B. Armsbury, M.D., Marine City.

James H. Barnebee, M.D., Kalamazoo; John C. Benson, M.D., Flint; Allen B. Bower, M.D., Armada; Horatio A. Brown, M.D., Jackson.

Russell G. Cushing, M.D., Detroit.

Russell L. Finch, M.D., Lansing.

John H. Gilpin, M.D., Cheboygan.

Walter W. Hammond, Jr., M.D., Plymouth; Victor L. Hill, M.D., Saginaw; Marquis R. Huffman, M.D., Milford; Frederick M. Huntley, M.D., Lansing; Russell R. Huston, M.D., Elk Rapids.

Edgar F. Imthun, M.D., Grand Ledge.

Lydia Jesperson, M.D., Battle Creek; Emery O. Jodar, M.D., Detroit; Arthur H. Johnson, Jr., M.D., Flint; Francis A. Jones, M.D., Lansing.

John A. Keho, M.D., Bay City.

Willard R. Lenz, M.D., Detroit; Victor E. Linden, M.D., Durand; George L. Lowry, M.D., Detroit.

Emory M. McCoy, M.D., Grand Ledge; Ray R. McCrumb, M.D., Lansing.

James A. MacDonell, M.D., Lowell; Howard L. Marsh, M.D., Flint; William H. Meade, M.D., East Lansing; Waldemar B. Mitchell, M.D., Grand Rapids; Bryce A. Miller, M.D., Flushing; Edwin C. Miller, M.D., Bay City; Harold A. Miller, M.D., Saline; George W. Moore, M.D., Bay City; Colin D. Munro, M.D., Jackson.

Paul J. Ochsner, M.D., Lansing; Gertrude D. Campbell O'Sullivan, M.D., Mason.

John W. Peelen, M.D., Kalamazoo; Stanley Z. Penzotti, M.D., Dundee; Charles B. Pillsbury, M.D., Ypsilanti; Howard J. Porter, M.D., Romulus; Enos A. Potts, M.D., Detroit; Hazel R. Prentice, M.D., Kalamazoo.

Wells C. Reid, M.D., Goodrich; Arthur J. Reynolds, M.D., Flint; Earl S. Rhind, M.D., Sault Ste. Marie; Philip A. Riley, M.D., Jackson; Charles L. Rivard, M.D., St. Clair Shores; Donald C. Rockwell, M.D., Kalamazoo; Arthur M. Rothman, M.D., East Detroit.

John F. Sander, M.D., Lansing; Leon E. Sevey, M.D., Grand Rapids; Arthur M. Shaeffer, M.D., Jackson; R. Philip Sheets, M.D., Traverse City; Morris B. Sofen, M.D., Kalamazoo; William H. Stewart, M.D., Petersburg; Myron V. Susskind, M.D., Jackson.

Frederick W. Tamblyn, M.D., Lansing; Walter M. Taylor, M.D., Ovid; Thomas P. Treynor, M.D., Big Rapids.

Harvard J. Van Belois, M.D., Grand Rapids; Raymond S. Van Bree, M.D., Grand Rapids; Buell H. Van Leuven, M.D., Traverse City.

Aaron V. Wenger, M.D., Grand Rapids; Clayton O. Willits, M.D., Saranac; Emery D. Winfield, M.D., Grand Rapids; Sherwood B. Winslow, M.D., Battle Creek; Donald R. Wright, M.D., Flint.

John P. Yegge, M.D., Kent City.

POLIOMYELITIS CONSULTATION SERVICE

The Michigan Crippled Children Commission again will *establish poliomyelitis consultation* service to physicians desiring same for cases or suspected cases of poliomyelitis in children from birth to 20 years of age, inclusive, according to Carlton Dean, M.D., Director. The family must be *financially unable* to provide this service. Where consultation is *not furnished locally,* such service is to be effective until June 30, 1944.

Poliomyelitis consultation as herein referred to is defined as meaning the original consultation by which the diagnosis is determined and does not include consultation in any hospital in the city in which the consultant resides, which services are provided for under our rules and regulations.

Types of Service

1. *A pediatrician* may be called for consultation for suspected cases of poliomyelitis before weakness or paralysis has occurred.
2. *An orthopaedic surgeon* may be called for cases where definite paralysis or weakness has been established.
3. Any physician (with the exception of Wayne County) desiring consultation services outlined above may call the Secretary of the County Medical Society or full-time City, County or District Health Officer.

In Wayne County call David Kliger, M.D., Medical Coördinator, Michigan Crippled Children Commission, phone Temple 15240, Detroit, Michigan.

4. The family physician may designate the consultant he desires provided the consultant lives in the locality and *his name appears on the approved list attached.*

Procedure

The Secretary of the County Medical Society or Health Officer should obtain the following information from the physician requesting consultation:

1. Whether or not the consultation is actually needed.
2. Whether or not the consultation is desired from a pediatric or orthopædic standpoint. If paralysis *has not occurred,* the consultant should be a pediatrician. *Where paralysis or weakness* has occurred an *orthopædic surgeon should be called as the consultant.*
3. Having determined the type of consultation needed, the physician should select the consultant of choice from the approved list of consultants in his area.

Method of Approval

Upon receipt of the foregoing information, the Secretary of the County Medical Society or Health Officer wires the Michigan Crippled Children Commission, *or its representative,* collect, giving name of the family physician, the name of the consultant selected, and the name of the patient. Example:

"A. Smith, Jonesville, desires W. Brown's consultation for John Doe."

The Michigan Crippled Children Commission will then wire direct to W. Brown, M.D., authorizing the consultation with A. Smith, M.D.

(a) Wayne County physicians phone David Kliger, M.D., Medical Coördinator of Michigan Crippled Children Commission, phone Temple 15240, Detroit.

(b) Upper Peninsula, where physicians desire orthopaedic consultation, the Secretary of the County Medical Society or Health Officer will wire E. R. Elzinga, M.D., Marquette; those desiring pediatric consultation, the Secretary of the County Medical Society or Health Officer will wire M. Cooperstock, M.D., Marquette. These forms will be referred to A. H. Miller, M.D., Medical Coördinator of the Michigan Crippled Children Commission for approval at the time of his visits to Marquette.

(c) Bay, Genesee, Huron, Lapeer, Macomb, Oakland, Saginaw, St. Clair, Sanilac and Tuscola Counties wire W. G. Hutchinson, M.D., Medical Coördinator, Michigan Crippled Children Commission, 326 Riker Building, Pontiac, phone 41071.

(d) Allegan, Barry, Berrien, Cass, Ionia, Kalamazoo, Kent, Lake, Mason, Mecosta, Montcalm, Muskegon, Newaygo, Oceana, Osceola, Ottawa, St. Joseph and Van Buren Counties wire V. L. Van Duzen, M.D., Medical Coördinator, Michigan Crippled Children Commission, 303 Loraine Bldg., Grand Rapids, phone 69346.

Authorization for Billing

Consultants should mail the poliomyelitis consultation reports to the Commission within 24 hours following the consultation.

Payment for consultation services will be accepted when the following information is on file with the Commission:

1. A record of the authorization by the Michigan Crippled Children Commission for the consultation (wire, letter, etc.).
2. Report of the consultation visit on the blanks which also includes space for billing provided for this purpose by the Commission, copies of which have been mailed to the consultants.
3. In addition to the billing on the consultation report, the consultant should submit billings on *his regular printed bill forms* exactly the same as that on the consultation report. Example:

Consultant Service (Fee Schedule).....$———
Mileage both ways — miles, at 5c per mile.....$———
(No mileage allowance within first 10 miles beyond city or village limits)
Total .....$———

4. *Important:* Only consultations approved by the Michigan Crippled Children Commission and its coordinators will be approved for payment.

Rates

Within a 10-mile radius of the city or village limits $10.00
Outside a 10-mile radius of the city or village limits 25.00
Mileage to and from the case outside of the 10-mile radius, per mile..... .05
Additional cases in rural areas on the same basis as rates within the 10-mile limit.

Note: It should be thoroughly understood by both physicians requesting the consultation and the consultants that this service is only for those cases where *the families are financially unable to make their own arrangements.*

The Michigan Crippled Children Commission reserves the right to determine the financial status of the family receiving consultation to determine whether eligible for this service.

In adults twenty-one years of age and over, contact local full-time City, County or District Health Officers for information concerning plan of consultation service.

Copies of the poliomyelitis consultation plan are being mailed to all consultants.



Epinephrine Hydrochloride 1:1000 N.N.R.

CHEPLIN'S solution of this powerful vasoconstrictor, hemostatic and circulatory stimulant is adjusted to a definite standard strength and is physiologically assayed by measuring the effect on blood pressure.

EPINEPHRINE HYDROCHLORIDE may be administered by hypodermic, inhalation or topical application, affording rapid relief of asthmatic symptoms, urticaria, angioneurotic edema, reactions following injections of biologicals, shock or collapse, and prompt control of certain types of hemorrhage. When used in conjunction with topical, nerve block or infiltration anesthesias, it produces a bloodless operative field and retards absorption of the anesthetic—thus prolonging the period of anesthesia. Literature on Request.

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"ACCEPTED STANDARDS AT AN ACCEPTABLE COST"

EPINEPHRINE HYDROCHLORIDE is packaged as 1:1000 in:

1 cc. ampules.
10 cc. rubber-stoppered vials.
30 cc. rubber-stoppered vials.
30 & 480 cc. bottles for topical applications.

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The JOURNAL
of the Michigan State Medical Society
Issued Monthly Under the Direction of the Council
Volume 42 September, 1943 Number 9

Address of Welcome at MSMS Industrial Conference

By Howard H. Cummings, M.D.
Ann Arbor, Michigan



President, Michigan State Medical Society

■ On behalf of the Michigan State Medical Society and the Department of Postgraduate Medicine of the University of Michigan I welcome you to this important conference on Industrial Medicine and Surgery.

At no time in our national history have so many pressing problems been thrust upon those physicians who deal with medical and surgical problems in relation to industry. Our own state of Michigan—world center for automobile manufacturing—was called upon to perform the miracle of conversion, conversion of the manufacture of automobiles to the manufacture of the implements of war. No one would prophesy that such a radical change, made in such a short period of time, would not dislocate our whole industrial system. However, this modern miracle was accomplished. And with it came many serious problems concerning the health of employes.

Thousands upon thousands of workmen with their families poured into our State from all parts of the Union. This migration in itself was a potential hazard from the standpoint of epidemics. But our physicians in public health work met this new problem and, although it has not yet been fully solved, marked progress has been made.

The inadequacy of housing facilities in most of our industrial centers was relieved in an unsatisfactory and temporary manner by trailers. Here, again, our public health men had to cope with unsatisfactory conditions and marked congestion. The public health officers, tireless guardians of our health, have succeeded in preventing any serious outbreak of disease. This fact is eloquent testimony to their fitness for the work and their unceasing efforts to prevent contagions.

Industrial plants all over the State have been either newly constructed, remodeled, or enlarged; new types of machinery have been installed, new chemical methods introduced, and all of these things have brought new industrial hazards. Doctors of Medicine in industry, though handicapped by the loss of young, able-bodied assistants, just as our civilian population has been deprived of over one-third of its physicians, have bravely assumed this added load of medical and surgical problems.

Young, active male employes of industry by the hundreds of thousands have been drawn into military service. Their places have been taken by women. It is well known that physical ailments are more common among female employes; in fact, State laws require employers to provide added facilities for rest and protection of women. It has been found that middle-aged married women and even older women stand the strain of wartime industrial speed-up better than the younger group of women. The employment of large numbers of women in industry produces new problems, partly social, partly medical: monthly absenteeism and the long lay-off in the

*Presented before the Postgraduate Industrial Medical and Surgical Conference, April 8, 1943, Rackham Memorial Building, Detroit.

latter part of pregnancy and during the puerperium.

The calling of able-bodied young men into military service has made it necessary to replace them with older men, many of whom have physical impairments. These older men are capable of much productive effort but they must be placed where their physical handicaps do not reduce their effectiveness nor their industrial activities impair their health. Thus the location of older men in industry calls for knowledge and sound judgment on the part of the industrial physician.

These are but a few of the pressing medical problems facing our industrial medical and surgical physicians. Other more specialized fields of medicine are involved and will be discussed during this conference. I am sure that every doctor attending will profit by listening to the addresses given. Full and open discussion of our own medical problems will be provided by the round tables.

Michigan physicians have met every challenge of total warfare. I am confident that through conferences of this kind, where the best minds are applied to present problems, we will help to hasten the victorious outcome.

MSMS

Present Status of Medical Programs in War Industries*

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■ YEARS ago Sir William Osler observed, "It is of use, from time to time, to take stock, so to speak, of our knowledge of a given disease, to see exactly where we stand in regard to it, to inquire to what conclusions the accumulated facts seem to point, and to ascertain in what direction we may look for fruitful investigations in the future." I wish to thank the Michigan State Medical Society for this opportunity to present some of the problems attending medical programs in war industries. Taking a cue from Osler, it would seem that we have now reached a vantage point in industrial mobilization from which the field of industrial medicine can be surveyed with greater clarity than perhaps a year or even six months ago.

It is difficult to give an appraisal of medical programs in industry today on a national scale because adequate data are not available. We do, however, have some information based on our contacts with industrial establishments in connection with official visits, reports received, and more specifically in connection with surveys which were conducted principally during 1942. The current information has been secured largely from two surveys of approximately 1,000 plants sponsored by our Division, namely an industrial nursing survey representing four-fifths of the total, including approximately two and one-half million workers located in thirty-six states; and a survey of medical services in industry, comprising the remainder.

A large number of the plants studied were engaged in essential war activities. All were chosen because they had some organized medical services already in existence in 1942. Completed schedules numbering forty-four in the nursing survey and nineteen in the medical survey were secured from the State of Michigan. The value of industrial medical service is emphasized by the questionnaire survey conducted by the National Association of Manufacturers. Of 1,625 companies answering this question, "Do you consider your health program (including medical, safety, and plant hygiene) a paying proposition?" all but five stated "Yes" The principal advantages cited were reduction in compensation insurance premiums, absenteeism, labor turnover, accident frequency, and occupational disease.

Industrial Medicine as a Public Health Weapon

Let us examine a few of the established procedures as time will permit.

Tuberculosis Control.—Using the photofluorographic x-ray equipment, with a sufficient volume of cases, tuberculosis can be diagnosed at the remarkably low cost of about 12 cents per worker,

*Presented at the Industrial Medical and Surgical Conference, Detroit, Michigan, April 8, 1943.

including the cost of the film for the miniature picture, retakes of a certain number not exceeding five per cent, the cost of development of the films, replacement of x-ray tubes, and the salaries of teams consisting of a physician, technician, and clerk, who operate the equipment. Persons found to have tuberculosis are reported to the state health departments in the usual manner.

It is estimated that plants with as few as 4,000 employes can economically afford such equipment, especially when it is considered that much time is saved in performing physical examinations.

Of thirty-three government-owned, contract-operated plants of the Ordnance Department surveyed by the Division of Industrial Hygiene, twenty-six are utilizing chest x-rays routinely. Many other privately-operated plants are employing this method. In fact, on the basis of the medical survey of 160 plants, some type of x-ray equipment was available in the plant dispensary in three per cent of the plants with less than 1,000 employes; in 8 per cent of the plants with 1,000 to 3,000 employes; and in 52 per cent of the plants with 3,000 or more employes. The Public Health Service now has eight mobile photofluorographic units in the field coöperating with State health departments in attacking this problem. Already over 200,000 workers have been examined. On the basis of 125,190 examinations which have been tabulated, 1,631, or 1.3 per cent, were found to have significant tuberculous lesions. Of these, 874, or 53 per cent, were minimal lesions; 707, or 43 per cent, moderately-advanced lesions; and 50, or 3.1 per cent, were far-advanced lesions.

In all of these tuberculosis case findings surveys, steps are taken to see that the open cases found are placed under satisfactory treatment or medical management.

Venereal Disease Control.—The period of the present war has witnessed the beginning of the first attempt at the control of venereal diseases, particularly syphilis, in industry. The principal features of this program include serodiagnostic tests as part of each physical examination, availability of laboratory procedures for the detection of syphilis and gonorrhea without reference to the economic status of the worker, and treatment either by private physicans or in public clinics, depending upon the financial status of the worker. Persons found to have uncomplicated syphilis in a noninfectious stage should not be refused employment solely on the basis of serodiagnostic tests provided they undergo such treatment as may be indicated, with the exception of a small number of workers exposed to toxic substances in which the exposure, plus the treatment, may result in an undue hazard. For the sake of all concerned, it is urged that a second serodiagnostic test be performed if the first is positive. Venereal diseases detected among industrial workers should be reported to the State authorities to ensure the proper investigation of contacts.

Studies of syphilis among selectees indicate rates of 2.4 per cent for white males, and 27.2 per cent for colored males, the total rate being 4.8 per cent for forty-four states and the District of Columbia. The rates among industrial workers are probably equally as high. A recent review of serologic surveys in industry showed positive rates ranging from a low of one-half per cent to a high of 10.5 per cent, with an average of 3.5 per cent. Usually the industrial rate will reflect the rate for venereal disease in the immediately surrounding general population.

The response of industry to this program has on the whole been quite gratifying. There was at first a certain amount of opposition to the employment of persons with syphilis. When explained in the proper light, most of this opposition has disappeared.

From our limited experience, represented by seventy-seven of the plants covered in our surveys, we find that one-third of the plants rejected all applicants for employment who showed a positive serodiagnostic test; it should be noted, however, that two-thirds of the plants will employ a luetic worker, provided he is not infectious or does not have any other contraindications for employment. Moreover, in about a fourth of the plants, when an employed worker was found to have a positive test his services were discontinued; however, from 75 to 80 per cent of the employers will allow an employe to remain, provided he will agree to take treatment as indicated.

Nutrition.—Under the guidance of the Office of Defense Health and Welfare Services,* the Department of Agriculture, and other federal and

*The nutrition activities of this office are now being carried on by the Food Distribution Administration of the Department of Agriculture.

State agencies, the importance of adequate nutrition for the industrial worker and his family is beginning to receive the attention which it has so long deserved. The rationing program brought about by an insufficient supply and improper distribution of certain foodstuffs will accentuate the need for health programs designed to inform the worker concerning the best method of obtaining a well-balanced diet, taking into consideration the increased costs. It should be emphasized that rationing has not changed the dietary requirements in the least, but only made it more difficult to fulfill these requirements.

On the other hand, rationing may result in a more adequate diet for a larger proportion of the working population unless it is attended by too great a rise in the price of foodstuffs. The experience of Great Britain which has had to impose a far more drastic system of rationing than is contemplated in this country supports this viewpoint. Among other things, Great Britain had the foresight quite early in the war to require plants employing over 250 workers to provide facilities for obtaining well-balanced meals. In this country the recent surveys already mentioned showed that restaurants or cafeterias were provided in approximately 39 per cent of the plants employing less than 1,000 persons, 56 per cent in plants with 1,000 to 4,000 employes, 67 per cent in plants with 4,000 to 10,000 employes, and 91 per cent in those with more than 10,000 employes.

Immunizations.—Like the poor, we have the spectre of epidemic diseases with us always. Owing to the increased amount of travel and the great transmigrations of a large proportion of the population because of the expansion of industry in many localities, the danger of epidemics of smallpox has become materially increased. Ideally, every employe should be vaccinated. Where this is not feasible, it should be made available on a voluntary basis to employes already on the job, and routinely performed on applicants at the time of the preplacement examination, who cannot show evidence of vaccination within the past five years. Experience has shown that approximately 40 per cent of employes will voluntarily avail themselves of the opportunity to protect themselves against this disease. It is possible to vaccinate this proportion without seriously interfering with production. The presence of this proportion of immunized persons greatly minimizes the danger of a serious outbreak. Should an epidemic seem imminent, the remainder can then be immunized without seriously disrupting plant production. Local authorities should also determine that the nonworking population, especially school children, has been immunized against smallpox.

In most urban communities, immunization against typhoid fever seems unnecessary as a routine measure unless epidemics threaten or really occur. The time factor involved and the higher proportion of unfavorable reactions, together with the lessened likelihood of outbreaks assuming major proportions, counterbalance any gains attributable to mass immunizations. The government-owned and contract-operated army arsenals favor smallpox vaccinations for all; and typhoid immunization on a voluntary basis unless the local health authorities think otherwise.

Streamlining Plant Medical Services

It is obvious to all reasonable persons that there is an insufficient number of physicians to meet all of the needs of the armed forces, public health organizations, and industry, and at the same time furnish medical care to the general population in the accustomed manner. The problem is much akin to rationing. Unless certain safeguards are instituted, someone is likely to do without essential medical services. The solution, in so far as plant health services are concerned, is dependent upon better utilization of physicians' time.

The previously mentioned surveys brought to light the fact that a full-time physician was not found in plants of less than 250 employes, and only one full-time physician was found in plants with 250 to 499 employes. The per cent of larger plants with one or more full-time physicians was as follows: 500 to 999 employes, 2.5 per cent; 1,000 to 1,499 employes, 7.7 per cent; 1,500 to 1,999 employes, 11.4 per cent; 2,000 to 2,999 employes, 21.0 per cent; 3,000 to 4,999 employes, 38.8 per cent; 5,000 to 9,999 employes, 59.1 per cent; and 10,000 or over employes, 90.6 per cent. Three-fourths of the smallest size plants, but none of the largest plants, had an on-call physician or physicians. On-call type of medical supervision was found among 60.6 per cent of the establishments with less than 1,000 employes; 32.9 per cent in plants with 1,000 to 2,999 employes; and 6.4 per cent in plants with 3,000 or more em-

ɔloyes. Plants having an on-call physician and ıo full-time registered nurse had usually less than 1,000 employes, while those with an on-call physiɔian, a registered nurse, and a practical nurse or first-aid worker had usually from 1,000 to 3,000 employes. None of the plants with 2,000 or more employes, which had a part-time physician, failed to have at least a full-time registered nurse.

The Procurement and Assignment Service has declared that as long as a part-time physician devotes more than forty hours a week in two or more plants manufacturing war materials, he may be considered essential. In the days ahead the physician in general practice will be called upon to participate to an even greater extent in the growing field of industrial medicine.

Preplacement Physical Examinations.—The purpose of a preplacement physical examination should be to determine in what capacity the prospective employe can be utilized without detriment to himself and his fellow workers. The emphasis should be on spreading employment as much as possible, rather than on exclusion. A worker past forty years of age or having a handicap sufficient to render him unfit for military service should be accepted wherever possible if for no other reason than that there is less likelihood that time and money will be expended training him for a job only to have him called to the armed forces. This also applies to women workers.

Recent Public Health Service surveys of one old and nine new large munitions plants showed that the average rejection rate for applicants reaching physical examination was 7.6 per cent. These rates, based on a total of 84,000 examinations, showed wide variation and ranged from 0.7 to 16 per cent. The fact that three of these plants averaged only 1 per cent rejections, as compared with four others in the group which averaged 14 per cent rejections, indicates that many employers and physicians are already finding it practicable and advantageous to place applicants at productive work rather than relegating them to the class of unemployables. This has also been shown in a survey of 2,064 industrial establishments by the Committee on Healthful Working Conditions of the National Association of Manufacturers. This Committee found that the most representative rejection rates fell between 2 and 3 per cent, and that 28 per cent of the plants rejected less than 1 per cent of the applicants. Physical standards should be based on the requirements of the job involved. For example, most persons free of mental disorders, active pulmonary tuberculosis, or severe visual defects are capable of performing clerical duties. The loss of a lower extremity or the presence of hernia, moderate degrees of heart disease, or diabetes mellitus under adequate control, need not be a bar to employment. In the past, there has been too great a tendency to set arbitrary standards with regard to arterial hypertension. All persons with arterial blood pressure over 150 millimeters of mercury systolic pressure, or over 90 millimeters of mercury diastolic pressure often have been declared ineligible for employment, although this is not always the case. It is hoped that time and experience will bring about more uniform physical standards in job placement, especially for those with marginal handicaps.

This should not be interpreted as suggesting that the quality or scope of the preplacement examination be relaxed. As it will become increasingly necessary to hire more substandard individuals, it will become even more imperative that good records of their physical condition at the time of employment be developed and maintained.

In view of the shortage of physicians, steps should be taken to simplify the physical examination, utilize nurses to a greater extent, and to relieve physicians of as much paper work as possible. In the past, too much emphasis has been placed on the previous or past medical history during a preplacement examination. It should be remembered that the applicant is seeking a chance to earn a livelihood and is not likely to admit conditions which may jeopardize this chance. Consequently, such interrogations, which may be conducted by a lay person to save time, should be kept to a minimum and should be limited for the most part to conditions occurring during the past few years which are likely to have a bearing on his employability. I want to emphasize, however, that a complete past occupational history is of paramount importance in proper placement.

The physician's time can be utilized more effectively by delegating as much of the preplacement physical examination as is feasible to nurses, nonprofessional nurses' aides, technicians, and lay persons. The laboratory work and chest x-ray should be performed by technicians, while the height, weight, visual and hearing tests, pulse,

and blood pressure determination can be performed by nurses, or, for some categories, by lay persons. Telebinocular visual tests performed by specially trained technicians are becoming increasingly popular. By applying these assembly-line measures to the medical department, the physician is enabled to perform a reasonably accurate examination in a short time. Even greater time can be saved in the examination of male applicants by examining several at a time, organ by organ, and dictating positive findings to a male clerk. With female applicants, somewhat more time is required.

Despite the need for economy of time in the preplacement and other examinations, efforts should be made to inform the applicant or employe concerning the nature of physical defects, particularly if they are correctible.

Periodic Physical Examinations.—There should be no relaxation in the periodic examination of persons exposed to toxic substances, nor in engineering methods of control of atmospheric conditions. The physician should have a working knowledge of the substances and processes involved, and of control measures. Lead, mercury, dermatitis-producing substances, carbon monoxide, degreasers, carbon tetrachloride, siliceous dust, oxides of nitrogen, and explosives are among the greater hazards encountered in industry. As with preplacement examinations, they should be streamlined to as great an extent as is consistent with accuracy. Periodic annual physical examinations will probably have to be curtailed to a large extent during the emergency. As a matter of fact, during 1942 not more than 10 per cent of the plants studied reported annual physical examinations given to all employes. Quite a large proportion of the plants, however, did perform annual or more frequent examinations of special groups of employes, such as crane operators. If possible, they should be done among persons over forty years of age or where there have been poor health records, with a view to reducing sick-absenteeism.

More Efficient Use of Nurses—The shortage of nurses in many localities is nearly as great as that of physicians. This has resulted in the necessity of using trained (graduate, registered) nurses to conserve physicians' time and using nonprofessional nurses' aides to take over duties previously delegated to trained nurses. Care should be exercised that these nonprofessional nurses' aides not assume duties for which they are not qualified. As nurses are being called upon to work more independently than formerly, carefully written standing orders should always be prepared. Written orders outlining the procedures to be followed were provided for nurses in 42 per cent of the plants studied with full-time physicians, in 37 per cent of the plants having part-time physicians, and in 30 per cent of the plants where the physician is on call. Thirty-six per cent of all plants surveyed provided written standing orders for nurses. Suggested written standing orders are being prepared by the Council on Industrial Health of the American Medical Association and will be made available to the State and local societies. Where nonprofessional workers are used, standing orders or written procedures for their guidance should always be furnished.

At the present time, there are about 10,000 registered, graduate nurses employed in industrial, commercial, and service establishments throughout the United States. The Advisory Group of the Committee to Study the Duties of Nurses in Industry of the American Public Health Association recommends that for the maintenance of complete health services in industry that there be one nurse up to 300 employes, two or more nurses up to 600 employes, and three or more nurses up to 1,000 employes, one nurse per each thousand additional employes up to 5,000, and one nurse per additional 2,000 employes. Additional nurses may be required because of special hazards, and to supply service for second and third shifts.

In plants where a full-time physician is employed, it was found from the nursing survey that the nurse's responsibility for care and treatment is limited to assisting the physician, or to the care of workers who do not need the attention of the physician. In plants employing a physician part-time or on call, the nurse sees all workers who are injured or ill and exercises judgment relative to medical treatment. She may administer the necessary care, give emergency care until the part-time physician makes his regular visit, or refer the worker immediately to a physician or to the hospital. It was found that nurses assisted the doctor in connection with medical examinations in 78 per cent of the 464 establishments which provided for medical examinations

of workers at the plant, and in 10 per cent of the 250 plants which arranged for examinations at the physician's office, the hospital or at some central clinic.

In staffing a plant with nurses, care should be exercised to avoid denuding the community of its nurses. There is little to be gained by having a sufficient number of nurses at a plant, while the hospital, upon which the plant is dependent for the treatment of its severely injured employes, has an insufficient number of nurses to perform its duties.

Role of Practicing Physicians

As the wartime emergency progresses, private physicians will or should be utilized even to a greater extent as consultants, particularly in the treatment of injuries and occupational diseases, and as part-time plant physicians. To meet the demand for physicians trained in the fundamentals of industrial medicine, State medical societies, universities, and other organizations have developed postgraduate courses for physicians intending to enter the field of industrial medicine. Despite the demands of private practice, these courses have been widely attended and promise to stimulate the interest of physicians in the protection of the health of workers.

Because the requisite data are not available, it is obviously impossible to specify the status of current medical programs in war industries in the country as a whole. The collection of these data depends upon the States themselves.

Michigan, at this time leading all other States in the value of government war contracts, appears to be in a better position than many other States to obtain information concerning medical services because of the frequent and close contacts of its Bureau of Industrial Hygiene with industrial plants, through district offices established in Detroit, Grand Rapids, Saginaw, Pontiac, Ann Arbor, and Kalamazoo. Moreover, Dr. Markuson, Director of the Bureau of Industrial Hygiene, is in a unique position to obtain first-hand information because he is also chairman of the Committee on Industrial Health of the Michigan State Medical Society, the only State having this arrangement.

Michigan has realized the necessity for centering attention on the small industrial plant which is not likely to have as complete medical service as larger establishments. This is evidenced by the fact that of the 1,300 plant surveys made by the State Bureau of Industrial Hygiene during the past year, 83 per cent were performed in plants of 500 or fewer employes, and 50 per cent were done in plants reporting 100 or fewer workers each.

The State is especially to be complimented on having made, with the coöperation of the Kellogg Foundation and the Hillsdale County Health Department, studies of all industrial establishments in Hillsdale County.

Finally, with the concerted effort of the State official industrial hygiene agencies and the medical society and others interested, and with Dr. Markuson in the position of both Director of the Bureau of Industrial Hygiene and Chairman of the Committee on Industrial Health of the State Medical Society, Michigan is in an unusually favorable position to diagnose difficulties in industrial medical programs, and with the correct diagnosis it should not be difficult to prescribe the appropriate remedy.

MSMS

Industrial Hygiene in the War Industries*

By J. J. Bloomfield
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■ Industrial hygiene has undergone such a metamorphosis since the World War that those of us who have been "on the job" for any length of time are prone to forget that many of our

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younger colleagues are meeting with the same problems which faced some of us twenty-five years ago.

Now I don't want to put you to sleep with an "I-remember-when" story. But it is important for all of us to remember that the advances in industrial hygiene have been uneven; that in some sectors, conditions have changed but little; and that hard-won victories of the past decades may be wiped out overnight by unpredictable changes in industrial processes.

Right now, there is greater awareness, on the part of all groups concerned, of the urgency of a healthful working environment in our war industries—greater than at any time in our history. Management, labor, and the professions are all determined that occupational hazards shall be prevented if possible; or detected and controlled promptly. Of course, there are many reasons for this—economic, humanitarian, and expedient. For the purposes of this discussion, the reasons are beside the point. Suffice it to say, the attitude of the last War was—"We have to have casualties on the battle front; therefore, why worry about casualties on the production front." Today, the attitude is: "What can we do to cut down industrial casualties?"

The result in the first instance was that accidents and toxic exposures were appalling. Conditions in munitions production were especially bad; picric acid and TNT poisonings numbered in the thousands through the years of the World War. Today, health and safety in the explosives industry is the keynote from the blueprint stage to full operation with hundreds of thousands of workers on the job 24 hours a day, seven days a week.

True, we have more occupational dermatoses than we had during recent peace years, but outbreaks of this type are much more speedily controlled than in the past. This is due largely to our greater and more specific knowledge of these conditions; and the increase in numbers is also influenced by the vast increase in the exposed population.

In the World War, there were hardly any official agencies of any kind to assist industry in the detection and control of occupational hazards. As you know, there are now industrial hygiene services in 38 State governments, as well as a dozen or more local units in important industrial centers and the Federal service which I represent. The value of these agencies lies not only in their direct assistance, but in their capacity to pool experience at the local, State, and National levels, and thus to prevent the recurrence of industrial hygiene problems.

It is through our close contacts with both official and private agencies that the Division of Industrial Hygiene, National Institute of Health, has been able to observe significant trends in our field during the present emergency.

Improvement in Plant

The physical expansion of war industry, as you know, has been phenomenal. New construction, almost without exception, has been planned and built with as much consideration for the fundamentals of industrial hygiene—ventilation, lighting, and sanitation—as for the functional efficiency of the plant. Many of the new installations are awe-inspiring—in size, ingeniousness, efficiency, and beauty. Some of you here today are justly proud of being "on duty" in some of these new plants of the "air age." On the whole, the converted plants, too, have been renovated with health and safety in mind.

Yes, the old "factory" is having its face lifted. And I venture to say that the postwar period will witness a similar change in the physical character of non-war industries. Many new war plants will be converted to consumer goods; and old non-war plants will be replaced by modern workplaces.

Conversion, of course, has not been without its difficulties. It has not always been possible to make an old plant as safe and healthful as we would like. However, it has not been so much the structural problem which has affected the control of industrial hazards, but more the three M's of conversion—*machinery, materials,* and *men.*

The Three M's of Conversion

In war, the factors affecting industrial diseases and accidents multiply. For example, both men and machinery accustomed to work with steel (as in the automotive industry) have been "converted" to work with aluminum for planes. An automobile body requiring the assembly of *six* hundred pieces is replaced by a pair of wings requiring *sixty-four* hundred pieces. Many ma-

terials and processes unfamiliar to the workers are introduced. And by the workers, I would include supervisory personnel as well as operatives. Yes, and the technical personnel in many instances.

In a zealous attempt to meet or beat that production schedule, everyone is apt to overlook matters relating to health, or perhaps not even to recognize them until some unfortunate incident results in casualties and lost time. Furthermore, vigilance in safety and health supervision is likely to be lost in the shuffle. With machines operating twenty-four hours a day, there is likely to be less efficient maintenance—a potential source of accidents. And, finally, even a well-trained staff, which has been accustomed to looking for and dealing effectively with the hazards of a converted plant's original processes, may not have the slightest idea of the hazards encountered in the production of guns or high explosives, let us say.

All of these war problems make it imperative that practical measures be taken to determine the hazards involved and the control measures to be applied. For management and labor, for the technical staff and the medical service, eternal vigilance should be the war plant's motto, if costly delays, wastage, and time-loss are to be prevented.

Machinery New and Old in War Production

One of the most important wartime problems in industrial hygiene is the introduction of new processes and the reintroduction of old ones. Take, for example, the widespread reintroduction of sandblasting. The silicosis hazard associated with abrasive blasting operations already has increased in magnitude and extent because in new installations and in many old installations it has been necessary to return to the use of silica sand as an abrasive instead of steel shot or grit.

The nationwide study of sand-blasting, made thirteen years ago, definitely showed that sand could be employed as an abrasive, if properly designed and well-maintained equipment were used. Unfortunately, war installations of sand-blasting equipment are frequently made hastily and without due thought to these requirements. Design and maintenance are especially important when abrasive sand-blasting cabinets, tables and barrels are employed. In room blasting, well housed and ventilated rooms are essential, and the worker must be protected by a helmet supplied with at least six cubic feet of dust-free air per minute. Certain types of automotive equipment are now available which will serve to reduce the dust hazard greatly. The secret of protecting the sand blaster is the machinery—in this case, properly designed and well-maintained equipment.

The substitution of silicon carbide cutting instruments for those of steel, as well as the replacement of cutting and milling with abrasive grinding processes, introduce new dust hazards which may be detrimental to health, and certainly affect production adversely. In the manufacture of cemented carbide tools, the finishing operations (grinding to the desired shape and sawing tool tips) are very dusty. These high concentrations of fine dust seem to produce a lung involvement which is being investigated thoroughly at the present time. Pending the outcome of this investigation, the dust should be controlled at its source by means of local exhaust ventilation. Collectors in the exhaust systems are advisable because of the value of the material collected.

The use of radium and of the roentgen ray for detecting flaws in metal castings and forgings is of increasing significance. New x-ray machines have been developed for this work which test more than 5,000 stressed parts per day, as contrasted with 100 parts, formerly considered a good day's work. Likewise, the use of radium in this field has progressed beyond the experimental stage.

The possible greater intensities and longer periods of exposure in penetrating ray inspection in industry obviously require much more complete protection than would be needed in most medical x-ray installations. Operators should be protected with lead sheathing and other workers should not be allowed in the vicinity of the operation. All sheathing should be tested and proved efficient against x-rays or gamma rays. Testing rooms should be isolated from all other operations, and walls should be sheathed with lead or other materials opaque to harmful radiations. These precautions will prevent the duplication of the experience of a California shipyard last autumn, in which nineteen workers were seriously burned when careless hospital attendants allowed the men, who had injured hands, to overexpose themselves before a fluoroscopic screen.

Noise is not a new problem in industry, but the rapid advances in aircraft design are creating new

noise problems. At the same time, the accoustical engineering profession is presenting us with new means of combating noise. The testing of airplane motors is a good example. This has always been a noisy operation, but motors of 1,500 to 2,000 horsepower and upwards produce an entirely different type of exposure. Where in the past the noise of testing motors could be kept to intensities of 90 decibels or lower, the peak has been reported at from 120 to 140 decibels, even in scientifically sound-deadened rooms. The suggested solution is the installation of sound-deadening baffles about the pipes and motors on a hinged arrangement so that ready access can be had to all parts of the equipment. Such measures will lower the noise level from 12 to 20 decibels. Although this may not appear to be a very significant reduction, it must be remembered that the decibel scale is a logarithmic (geometric) progression, rather than an arithmetic progression; therefore, a reduction of 2 decibels in these high ranges means cutting the volume of sound in half.

The experience of the Chrysler Motor Company in this field has been most helpful. Dr. Prendergast reports that high sound intensities long continued may cause deafness, but that somewhere around the 125 decibel level, the problem becomes more involved. Little is known about the effects of vibration on other parts of the body at these higher levels. Consequently, all Chrysler employes exposed to high levels of sound are now given special physical examinations which include audiometer tests, complete clinical laboratory tests, basal metabolism, and electrocardiography.

One of the serious results of the first "M" in conversion is the inability of some industries to obtain the necessary protective equipment, such as rubber used in respiratory protective devices, fans, and motors for ventilating systems. This places a definite burden on the industrial hygienist, and management. The engineers and chemists are under a particular and ever-present challenge to devise makeshift protective devices. I think it can be done, and that it will be done, providing that the "eternal vigilance" I spoke about before is maintained.

Materials New and Old in War Production

In running through any month's reports from our own field units and from the forty-odd governmental industrial hygiene services, I am always impressed with the growing alertness of the war industries to the potential hazards of toxic substances. Manganese poisoning (a possible problem here in Michigan), methanol, carbon monoxide, tetryl, chromic acid, lead, fluoride, chromium, magnaflux—such a list is what I would call a "run-of-the-mill" group of problems presented in one unit's report. Some of these are problems for which we have the answers; others are already under investigation; and others are what we might call "borderline," we know a little, but not enough.

Dr. Markuson, Director of the Michigan State Bureau of Industrial Hygiene, tells me that there is some concern here about the possibility of manganese poisoning developing in the tank plants. Armored steel used in the tanks contains a fairly high percentage of manganese. During the welding processes, when the steel is subject to extremely high temperatures, it is thought that fairly high concentrations of manganese fumes would result.

Our experience indicates that manganese poisoning from welding of steel is unlikely to occur. The accepted allowable limit is 60 milligrams of manganese per 10 cubic meters of air. With mild steel electric welding using uncoated electrodes and under extreme conditions, the proportion of manganese in the welding fume might be two or three times the percentage in the original metal. When welding with coated electrodes containing ferro-manganese in the rod coating, as much as 10 per cent of the welding fume might be manganese oxides. Under such conditions, a total concentration of welding fumes of 600 milligrams per 10 cubic meters would be required before the toxic limit for manganese was exceeded. Effective methods for the control of welding hazards are known and their application in the tank factories will produce good results. While it is true that the supply of protective and control material has not kept pace with the demand in some cases, other means for securing protection could have been devised. Frequently, insufficient measures have been taken to shield the arc and protect other workers in the vicinity from welding flash, or to remove toxic gases and fumes with local exhaust ventilation.

There are some materials being used which are new to industry, and there are a large number of old materials being put to new uses. Like-

wise, some new organic compounds are in use and probably many others are being introduced. Nevertheless, by far the largest proportion of our new problems result from exposures to toxic materials which we have known for a long time, but which are now being employed in strange usage, or are being used in converted industries which have never before had to use them.

Dr. Prendergast of the Chrysler Corporation has given us two very good examples of new utilization of common products. This company had eliminated the use of benzol in its plants. Recently, their industrial hygienists found that benzol was being used in a new operation as a flotation agent for the polishing material employed in finishing reflectors. The production people in charge had never had any experience with benzol, and were thoroughly surprised to learn that it was a toxic substance. After a few trial runs, a hydrogenated naphtha—much less toxic than benzol—was found to be entirely satisfactory for the operation. Members of the industrial hygiene service have been able since then to make other suggestions which improved the polishing properties of the compound used. Here an industrial hygiene investigation not only reduced a health hazard, but actually presented the company with a production gain.

Carbon tetrachloride had also been abandoned by Chrysler, except as a fire-fighting fluid. Formerly used for a number of purposes, this material had been replaced by safer substitutes in every case. Recently, carbon tetrachloride put in an appearance at one of their gun plants. It was being used in fair quantity in a certain critical tapping and machining operation. In order to provide a technically satisfactory product within the very close tolerance demanded by Government inspectors, up to 25 per cent carbon tetrachloride was used along with a cutting compound. Tests showed that the condition was very unsatisfactory from the health viewpoint. Because the work was so precise, it was highly possible that the production operation would have to cease if a change was made without a satisfactory substitute being provided. This, of course, could not be considered. However, test trials revealed that very small percentages of trichlorethylene would do as well as larger percentages of the more dangerous carbon tetrachloride, and the change was made without delay. With a maximum of 8 per cent trichlorethylene, better production results are being obtained and the atmospheric concentrations have not exceeded 120 p. p. m. at any time or under any conditions. Trichlorethylene has shown some interesting properties in connection with cutting compounds and may prove valuable on other jobs.

Benzol and carbon tetrachloride certainly are not new materials and an old hand in industrial hygiene would not consider them interesting except that the applications have not been common. They are examples of old materials coming in under the guise of new ones.

In a West Coast light tank plant, there has been a tremendous amount of welding on armor plate. Numerous cases of throat irritation developed among the welders. Three types of rods were used, one of which showed high percentages of both fluorine and chromium. Analysis of numerous samples from the breathing zone of welders working on the tank hulls showed that the fluorine concentration ranged from 1.6 to 5.1 milligrams per cubic meter. The amount of chromium was approximately ten times the safe amount of chromium that could be present as chromic acid. Unfortunately, there are no definite data on the maximum permissible concentrations of fluorine and chromium in electric welding operations. However, it is believed to be very doubtful that hexavalent chromium compounds or chromic acid would be formed in appreciable amounts. Other forms of chromium would not be toxic in the concentrations encountered in this instance. While the maximum permissible continuous exposure to fluorine has not been established, our Division recommends that the concentration should be maintained at as low a level as possible, certainly below 1 milligram per cubic meter. In the plant under consideration, the tank hulls were mounted on spindles so that they can be rotated during construction, with the side on which the work is being performed always under the welder. As many as four welders at a time often work on one hull, without mechanical ventilation. Since the possibility of chromium poisoning seemed remote, and since adequate ventilation can be applied, it is probable that the throat irritations will disappear when protective equipment is installed.

During the last six months of 1942, the Detroit Bureau of Industrial Hygiene visited 405 plants, employing a quarter of a million workers. More than three-fourths of these establishments

were manufacturing iron and steel transportation equipment and machinery. The problems of first importance in Detroit plants, were: grinding and buffing operations, welding, solvents, carbon monoxide, spray painting, lead and its compounds, silica dust in foundries, plating solutions and metals, dermatitis producers, chiefly cutting oils. In addition, one plant was engaged in luminous dial painting—without control measures; in another, infra-red dryers were not adequately protected.

In certain repair shops on the West Coast, where brake-drums were being built up by metalizing with steel wire, the employes complained that the fumes made them sick. A preliminary investigation showed that the fumes contained iron particles about four microns in diameter, which when breathed through the mouth produced a peculiar taste and other vague symptoms. It was also observed that when metalizing was done with brass wire, white zinc oxide smoke was not produced. This led to the suspicion that the operation was going on in a reducing atmosphere of excess acetylene, with a possible high concentration of carbon monoxide. This premise was confirmed in tests of a large scale metalizing job using steel wire. Concentrations of carbon monoxide as high as 500 p. p. m. were recorded in the breathing zone of the operator. This is a good example of how our "ancient enemy" carbon monoxide can break out again, masked by other potential toxic exposures. The old rule holds good, "wherever there is incomplete combustion, suspect carbon monoxide." I recall that in the report of the Detroit Bureau of Industrial Hygiene for the last six months of 1942, carbon monoxide was the hazard receiving attention in 11 per cent of the plants visited.

There is also some concern about Magnaflux in this area, as also in other parts of the country. So little is known about this compound that it would be useless to comment on it at this time. Studies are under way at the National Institute of Health, which we hope will clarify the situation.

I would like to warn this audience that if we do not institute engineering methods for safe handling of radium dial painting, we are going to have a repetition of the World War experience. A number of fatal poisonings occurred in that period, and with the vast increase in production of luminous dials in this war the number of casualties from this cause is likely to be correspondingly greater.

Radioactive dust, gamma rays, and radon are the potential hazards, both in the storage of dials, in dial painting, and in handling the radioactive luminous compounds. In addition to the commonly recognized luminous compounds, zinc sulfide which has been given fluorescent properties by exposure to radium should be handled with caution.

Exposure to gamma rays should never exceed the rate of 0.1 roentgen per eight-hour working day per person. The maximum allowable concentration of radon gas in the atmosphere at any time is 10^{-11} curie per liter.

The hazard is not being met with adequate engineering protection in a number of recently established factories, and carelessness in handling is even more prevalent. For example, we recently found several boxes sitting on the tables the girls used in a plant where the physical equipment of the luminous paint rooms was based on the recommendations of the National Bureau of Standards. Each box held forty vials, each containing 1 gram of the luminous powder. This practice was presumably unknown to the foreman. Obviously, such dangerous stock should be kept outside, and as far as practical from the painting room. It should be under the supervision of one person who should supply each worker with a minimum amount at a time. After these boxes were removed, tests still indicated that the intensity of radiation at various points in the room varied from three to five times the accepted allowable maximum. Many painted articles were stuck around this room—in desk drawers, on desks, on tables, and stacked on the floors. Those in charge thought no danger was associated with the luminous paint *after its application to the article*—a completely false idea. I can think of no better example of the need for education of management, supervisory personnel, and operatives, on the true properties of the substances they use.

The problem of dermatoses, as I suggested before, bulks large in war industries but is subject to speedy and effective control. Dr. Schwartz will give you a thorough account of current problems in this field. But I would like to point out that some of the industrial causes of dermatoses can go more than skin deep. For example, one cutting oil with a high sulphur content was used

in a process where machine threads were cut with silicon carbide abrasive wheels, the temperature being high enough to liberate sufficient hydrogen sulfide to cause poisoning. White lead, also used occasionally as a cutting compound, offers another possibility of systemic poisoning in such operations.

Chlorinated paraffins, chlorinated phenols, antimony oxide, chromic oxide, and similar materials are commonly considered in relation to their dermatosis-causing properties. When used in water-proofing, fire-proofing, and mildew-proofing of canvas fabrics such as tent cloth, vapors may be liberated from these chlorinated compounds when they are exposed to high temperatures in drying the fabric after it has been coated. These toxic vapors may cause serious poisoning unless the drying ovens are provided with exhaust ventilation. The dermatoses associated with these substances may be prevented by suitable protective clothing and creams.

Manpower in War Production

We have briefly considered some of the problems connected with new and old machinery and materials in conversion to war production. What of the men? I feel very strongly that "manpower" in industrial hygiene must inevitably include all of us—the professional and technical personnel responsible for production and for health and safety; the supervisory personnel; and the workers themselves and their representatives.

The industrial hygienist has done a good job in the past; and is doing a better one today. As a result of successful control of accidents and disease in the plant, the whole task of industrial hygiene has grown. And we have a larger task force than we have ever had before. Management and labor alike have a greater understanding of the aims and methods of industrial hygiene. The old bromide, "Nothing succeeds like success," is not inapplicable to the progress of recent years. Business and public health have known for a long time that if you give your public a product that serves them well, they will come back for more and more.

As a result of this increasing interest in industrial hygiene, more and more problems are being brought to our doorstep. Not only more in number, but more in variety. The *Manual of Industrial Hygiene* just published by the Division of Industrial Hygiene, National Institute of Health, under the sponsorship of Dr. Selby's committee, indicates the widening scope of our field. During the last war, it would have been fruitless to ask an industrial hygienist for advice on mental hygiene, control of communicable diseases in industry, nutrition, health education, and health of women in industry. Yet you will find chapters on each of these subjects in the *Manual.*

There has been a feeling in some quarters that the broadened field spreads too thin the energies of the industrial hygienist. I do not see it this way. Certainly, the industrial hygienist's first and most important responsibility is to establish and faithfully maintain a safe and healthful working environment. His first and most important duty is the reduction of industrial disability in its strictest meaning. But he has long since learned that his knowledge of industry, of management and labor, is inseparable from his knowledge of mechanical and chemical hazards. Surely he cannot escape using his special capacities as a channel for other services which will materially assist him in his paramount objective—industrial health. In a word, I do not expect the industrial hygienist to do the health officer's job, the private physician's job, the nutritionist's job, nor the labor relationist's job. But I do expect him to see to it that these others contribute their full share to the protection of the American worker's life and health.

There is no place for "specialization" within industrial hygiene service. We are in some danger of this overemphasis upon certain phases of our program at this time, especially because of the rapid introduction of new personnel not only into industrial medicine and governmental industrial hygiene services, but also into production staffs, personnel management, and into the labor force itself. For example, a plant or an industrial hygiene unit can become keenly interested in the program for nutrition in industry—a highly desirable interest—to the neglect of exposures to mechanical and chemical hazards. Or, as frequently happens, a labor-management committee or a union local, becomes deeply concerned about "absenteeism," and because so much of lost time is either directly the result of sickness and accident, or of causes intimately related to health, the problem is brought to the industrial hygienist for solution. Here, again, the challenge is to preserve the over-all viewpoint, to lend interest

and counsel, but not to undertake the actual solution of the problem.

As to the rapidly changing character of the labor force in our war economy, there can be no question that this factor will create many new problems in industrial hygiene. Much has been written concerning the susceptibility of women, adolescents of both sexes, and older workers to certain industrial diseases and to general sickness. But I am certain that the conservation of war manpower, including these new elements of the population, offers no more of a problem than the conservation of peacetime manpower. We know that the standards for safe and healthful working conditions laid down during the peace years are as effective in the protection of women, youth, and oldsters, as in safeguarding the adult male worker—*if they are applied.* It seems to me that the mounting concern about the health of women and substandard workers is of particular value in that it may result in getting done a number of the practical things which industrial hygiene has been recommending for many years. If we give our new war workers healthful working conditions, adequate training in safe practices and health conservation, and good medical services, we can expect as good results in reducing the time-loss due to industrial disabilities as we know we can obtain among the "normal" labor force.

Industrial Hygiene in Postwar Planning

It is not, I believe, too early to look ahead to the peacetime problems of industrial hygiene. The transition from war to peace-time production will bring about changes in materials, processes, and the types of jobs. Demobilization of our armed forces and conversion of war industries may result in an even greater transmigration of workers and their families than we have experienced in the war. The accompanying social and economic dislocations may augment problems of medical care, particularly as it relates to industrial hygiene. Moreover, management, labor, and the public at large will have learned more of the benefits of industrial hygiene to industry, to society, and to individual workers. The demand for industrial hygiene services is sure to increase.

The experience which we are accumulating now and the expanded task-force of industrial hygiene should be invaluable in planning for the peace. These constructive forces will not exert their maximum influence unless the professions now active in this field accept the challenge which the "planners" have given us, and begin now to think realistically of the future.

Your task and mine is of the first importance in the war effort. Our wartime problems make teamwork a necessity. Through the governmental industrial hygiene services, the industrial physician or safety engineer is in a position to obtain all the preventive programs necessary for solving health problems. Teamwork should begin in the plant. That is how we reduced accidents in this country. It is high time that we got as excited and active when an occupational disease or a common illness occurs as we now do when someone is injured in the plant.

Management should consider its industrial hygiene department or its medical department as one of the most constructive and efficiency-building resources in the plant. The industrial hygiene department should be given the dignified status it ranks, on a par with operations, and its chief should be able to discuss his business directly with top management. The workers, too, have a stake in the program, and the industrial hygiene service should insist on management's enlisting the coöperation of labor, not as a passive recipient of health and medical services, but as active partners. With this kind of teamwork in the plant, the present and future of industrial health is assured. And such teamwork in many plants throughout the country will be a most potent influence for better community and National health in war and peace.

MSMS

PENICILLIN AND GONORRHEA

The USPHS VD Research Laboratory, Staten Island, N. Y., reports on treatment of sulfonamide-resistant gonorrhea with penicillin: seventy-six patients uncured by sulfonamides were given intermuscular injection of 10,000 units of penicillin every three hours, night and day, for forty-eight hours. With one exception the group attained clinical and bacteriological cures. The dose-time ratio employed was arbitrary. Work now under way is directed toward determining maximum amount of drug and minimal period of treatment sufficient to produce a satisfactory cure rate.

Absenteeism of Industrial Workers*

By Andrew T. Court
Detroit, Michigan



Labor Economics Section, General Motors Corporation.

■ In the Spring of 1942, a significant increase in serious sickness was anticipated among General Motors workers during the ensuing period—that is, the year now past. It was believed that fatigue incident to long hours in war factories, epidemics resulting from population movements and the increased employment of substandard and handicapped persons would bring a sharp increase in sickness among industrial workers in 1942.

Hours have increased, workers have migrated and the handicapped have been employed, as expected; however, up to this time there has been no evidence of any significant increase in the rate of serious sickness—that is, non-occupational disability lasting more than a week—among General Motors employes. Other companies throughout the nation show an increase of 15 per cent in serious sickness in the last quarter of 1942 over 1941, which, in turn, was slightly above 1940 and 1939.

Chart 1 analyzes the causes of disability among industrial workers for this group of concerns reporting to the U. S. Public Health Service (which excludes General Motors). It should be noted that all of the increase in disability rates has been in respiratory diagnoses, the other major classifications having remained about stable. It should further be noted that for the whole period from 1939 through 1942, respiratory difficulties are both the most frequent and the only expanding major cause of disability. The almost universal use of supplementary vitamins and the wide availability of cold shots does not seem to have helped much. It is worth noting that the appendicitis disability rate declined substantially

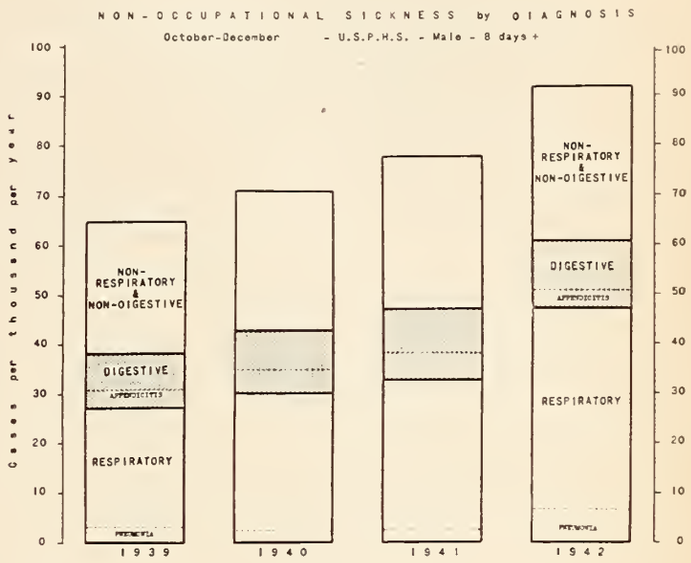


Chart 1.

in 1942. This development, considered in the light of the high general level of prosperity, adds further confirmation to the observation—that appendectomies are often in the nature of fill-in surgery.

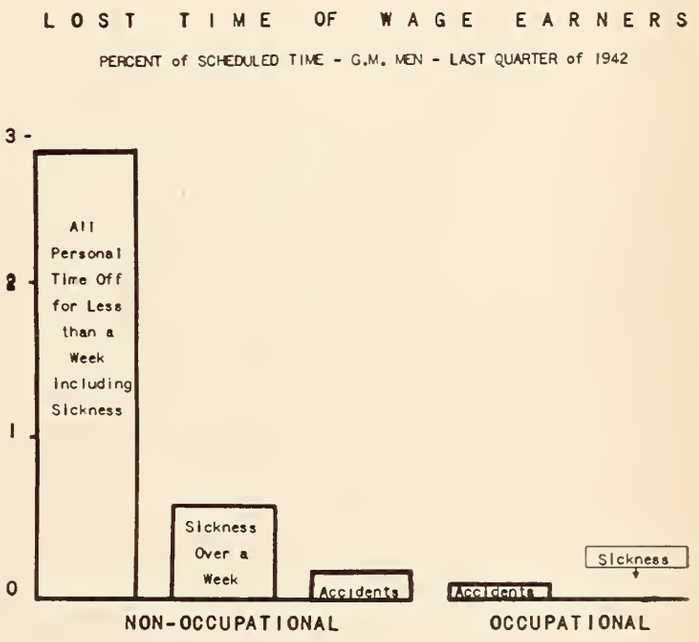


Chart 2.

The data which we have been reviewing refer to male rates only. The excess of the female above the male rate runs from 70 to 100 per cent. Since the proportion of women to men in General Motors and in other companies has doubled in the last year, a sharply increased load on plant medical facilities and insurance plans has oc-

*Presented at the Postgraduate Industrial Medical and Surgical Conference, April 8, 1943, Detroit, Michigan.

curred, even though there has been no great increase in sickness rates for either sex taken alone.

In connection with the subject of medical load, the relative importance of various types of disability in the total absenteeism picture may well be considered. Chart 2 shows for General Motors men the time lost in 1942 from short-term sickness, serious sickness, non-occupational accidents and occupational accidents. The relative unimportance of the last category is obvious. Recent public statements by poorly informed persons have exaggerated the importance of industrial accidents by 1,000 per cent or more. Naturally, this sort of error tends to misdirect woefully the energies of persons intent on helping improve industrial attendance.

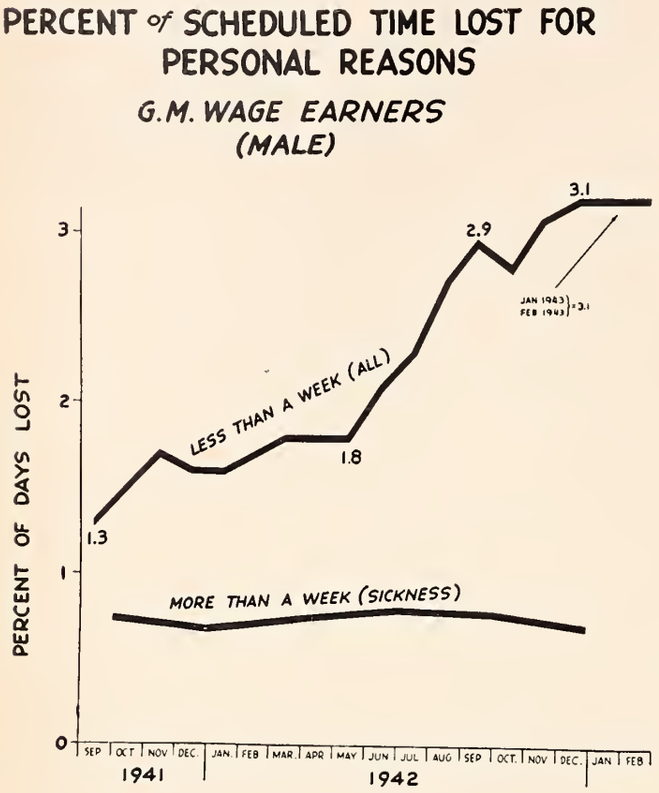


Chart 3.

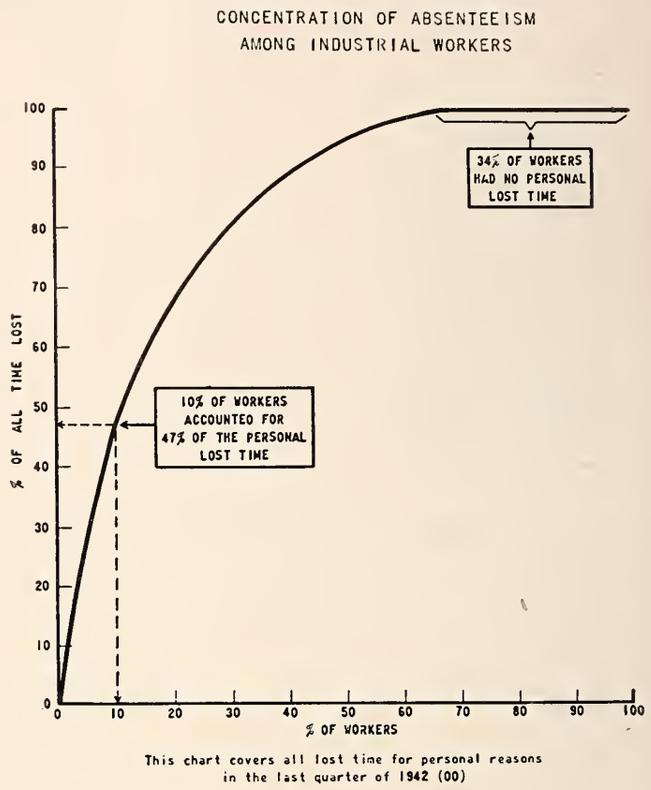


Chart 4.

Chart 3 compares the stable rate of serious sickness among General Motors factory workers, mentioned above, with a sharp increase in short-term absenteeism which has occurred among these same workers. An analysis of this rapidly increasing short-term absenteeism shows that the workers themselves give personal sickness as the reason for non-attendance in about two-thirds of all cases, with sickness of other members of the family and other personal needs making up the balance. When this short-term peronal absence (alleged to be mostly sickness) is analyzed, day by day, it is found that it is heavily concentrated on Saturdays and Mondays. In fact, these days average about twice the lost-time rate that is shown on payday each week. Thus, it appears that the type of absenteeism which is currently most disturbing—that is, short-term absenteeism—is usually attributable to sickness which reaches epidemic proportions around the week end.

Another outstanding fact about personal lost time is shown on Chart 4. Absenteeism is concentrated among a few workers who compose a chronic fringe having more than their share of time off, and it is pretty much the same group month after month. Ten per cent of the workers often account for half of the personal lost time. Looking at this chronic fringe, it is significant that one outstanding characteristic is the relative youth of the group. Chart 5 shows personal lost time by age of worker for short-term absences and also for serious sickness lasting more than a week. This chart, it should be noted, covers men only. It confirms the common observation that the time lost from serious sickness does not begin to mount before age fifty-five or sixty. By contrast, the *short-term* absenteeism among men is worst in the youngest age groups.

The situation among married women is entirely different.

Chart 6 shows the week-to-week trend of this

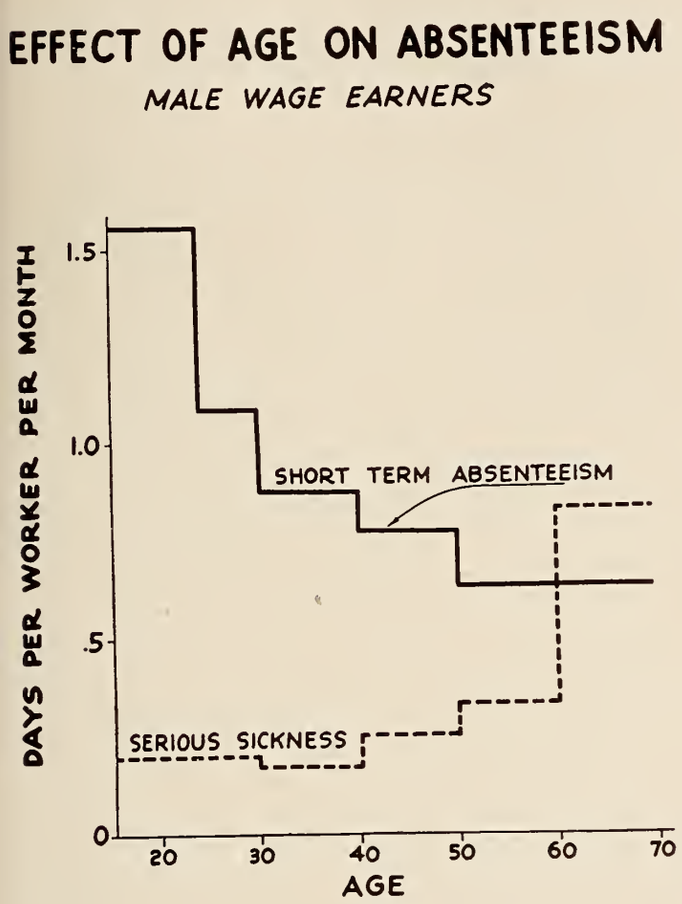


Chart 5.



Chart 6.

short-term absenteeism in Michigan over the last eighteen months. Immediately apparent is the effect of holiday seasons, sporting events and the weather on the absenteeism rate.

As was noted before, the non-attendance increase has been entirely in short-term absences. Since these are concentrated in the younger age groups, it may be concluded that the increased absenteeism reflects a particular type of disability to which young people are peculiarly susceptible, which is concentrated among a few prone individuals over week ends, and which reaches pandemic proportions around holidays and sporting occasions.

Once again, it should be noted that absenteeism is concentrated among a small group of workers. Excessive lost time is concentrated among a few individuals who seem peculiarly subject to temptations and who probably are not fully and thoroughly conscious of the importance of their regular attendance to the war effort. Also, they may have problems of personal adjustment or misunderstanding which contribute to their difficulties. It is not easy to estimate how effective a plant physician can be in dealing with cases of this character; however, in some plants, when returned absentees claim sickness, they are cleared through the plant medical department before re-employment. If, at that time, the physician or the nurse has an opportunity and enough leisure to encourage the individual to talk freely about his, or her, personal problems in a relaxed and non-disciplinary atmosphere, it may be possible, in a worthwhile number of cases, to help effect some re-orientation of the individual's understanding of his job or his home problems which will enable him to cope better with those temptations which lead to excessive "week-end sickness" and related types of absence.

MSMS

Chronic prostatitis will at times cause severe back ache.

* * *

The difference in leg length occasionally seen after poliomyelitis in children may be compensated by closure of an epiphysis in the sound leg.

—Eugene W. Secord, *Detroit*

Mental and Psychological Problems Relative to Industrial Employment*

By Frank F. Tallman, M.D.

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■ The place of psychiatry and psychology in industry has been a subject of a rather extensive bibliography. Dr. V. V. Anderson, Dr. Lydia G. Giberson, and Dr. Temple Burling are prominent among those who have made outstanding contributions in this field. I wish to acknowledge my indebtedness to these colleagues and to many others too numerous to mention for helpful material from their work. Industrial physicians and management, too, would gain much by a study of their papers.

Although psychiatry has evolved more slowly than many medical specialties, it has acquired a body of useful knowledge which can be put to more practical purposes than is generally supposed. Psychiatrists are concerned not only with the mentally ill but, to a greater and greater extent, with the broad and fascinating riddle of man's relationship to man and to his environment. This more recent interest is a natural evolution stimulated by the discovery that personality development and individual behavior could not be understood without careful study of total environment. In other words, man does not live in a vacuum. It is true that some problems originate almost entirely within the individual. It is equally true that environmental influences are of extreme importance in the development and behavior of everyone from birth to death, because throughout the whole of his existence an individual rides a merry-go-round technically known as the doctrine of circular response. This rather pompous phrase is really a simple though vital concept which implies that an individual is continuously being changed by his environment and is, at the same time, bringing about changes in that environment. Perhaps an example or two will clarify this. It is commonly recognized that a parent vitally affects the personality and function of a child. It is not so frequently remembered that the child itself changes and modifies the attitudes and behavior of a parent. In a similar way, a supervisor in a factory modifies, constructively or otherwise, those who work under him. So, too, their attitudes, individual and group, bring about responsive changes in him. Thus it is easy to see how a supervisor who does not understand men could create many difficulties. It must be recognized that the performance of an employe, whether he be manager or sweeper, depends to an important extent upon emotional situations which he encounters in his environment. The man at work cannot be adequately understood unless he is considered as a total human being and not merely as a man who operates a machine. In the same way, the behavior of an executive group cannot be properly interpreted unless one takes into consideration the personality of the individual members of the group.

Industry has for a long time recognized one important phase of human behavior, namely, ability. Various psychological and psychometric tests have been devised in an effort to put the right man in the right job. Unquestionably these tests are useful, but they have had the rather unfortunate effect of creating in the minds of management a dangerous sense of complacency so far as placement policies are concerned. Because an individual has a definite and measurable skill does not in any way imply that he has the emotional development which would permit him to use his skill profitably in every situation. Thus a good placement study must include skill plus personality plus the environmental circumstances of the worker. This point of view is equally pertinent in the study of accident proneness and accident prevention. Safety experts have gone far in recognizing the emotional springs of human behavior but not far enough, because the knowledge gained through a study of industrial accidents is not sufficiently exploited in dealing with individual cases. So, too, attempts to deal with absenteeism without emphasis upon the individual concerned will meet with only partial success. These problems are of increasing importance, and I shall turn to a discussion of them later.

Industry tends to think of its employes in several ways—as men who operate machines, men who have accidents, men who have special skills, absent men, but only occasionally as human be-

*Read at the Postgraduate Industrial Medical and Surgical Conference, Rackham Building, Detroit, April 8, 1943.

ings. These examples indicate, I think, that the discipline of psychiatry can be of practical service to industry, both from the standpoint of production and of human relationships. Dr. Ralph Lee has recently written a manual for foremen and executives. He has called it "Man to Man on the Job." I think this phrase contains all that I have been trying to say, and says it more effectively. I suggest that you read this important contribution.

Let us consider what psychiatry has to offer to the more circumscribed problem of diagnosis and treatment of mental disease in industry. There are in any large establishment individuals who become mentally ill or, as is more frequently the case, maladjusted. In this area psychiatry should function as any other specialty of medicine. Firms employing large groups of individuals should add a psychiatrist to their medical department for the specific purpose of dealing with individuals who require this specialized attention. There are many executives and employes alike who need the advice and help which a well-trained psychiatrist is equipped to give. A considerable number of these individuals are psychoneurotic, become temporarily depressed, react badly to pressure, or become maladjusted in their emotional life. Skillful handling of these problems would result in their usefulness being restored and would very likely prevent the development of more serious disturbances. An additional responsibility would be to work with the accident prone and those who are chronically absent in an attempt to deal more scientifically and thus more profitably with these serious problems.

Industrial physicians are using the principles of psychiatry in their daily work and are keenly aware of the implications of psychosomatic medicine. I believe this fortunate state of affairs to be more true of the industrial medical group than it is of other specialties, but I am satisfied that the industrial physician has too many other responsibilities to allow him to spend nearly enough time in this field. A good industrial physician plus a psychiatrist working together would be an unbeatable team.

In a sense, an industrial establishment is not unlike a school. Successful educators have long recognized that if schools are to be effective they must take into consideration the whole child. They well know that the total development of the child is of more importance than the mere acquisition of knowledge. In the same way, workers, and here I conclude everyone employed, will get more satisfaction from their working situations and will consequently give a great deal more to the job of producing the most of the best quality at the cheapest price, if they are considered as individuals and not as complicated and unpredicable devices attached to machines. It is, therefore, my further suggestion that plants utilize the psychiatrist as a personality consultant and teacher, charged with the responsibility of working closely with departments of employment, personnel and training. He would then be in a strategic position to promote a better understanding of human relationships and behavior throughout the whole plant, thus greatly improving the general morale.

Psychological Problem Types

I have outlined in general terms a suggested arrangement which would appear to have some promise in dealing with the psychiatric and psychological problems which face industry. I wish now to more specifically discuss the type of problems which might be referred to the plant psychiatrists.

As I have already stated, a few individuals would need attention because of a definite psychosis, either functional or organic. There are, no doubt, a number of employes who give evidence of syphilis of the nervous system and who would be greatly helped by proper treatment. Some of the older workers, particularly now that labor is scarce and older men are being used, show arteriosclerotic disturbances of emotion and mild periods of confusion. Then there are others who have marked alternation of moods and who might be classified as manic depressive personalities, and some, too, who give unmistakable evidence of schizophrenic behavior, particularly of the paranoid type. There are unquestionably many employes who are psychoneurotic with evidences of compulsions and obsessions, and a larger group who will manifest marked anxiety symptoms with emphasis on overconscientiousness and insistence upon impossible degrees of perfection. Undoubtedly many individuals will exhibit involutional states causing them to feel inadequate, depressed and hopeless. Then there are those who, because of environmental situations

of both a factual and emotional nature, suffer with reactive depressions. This type of maladjustment reacts well to treatment and is a most hopeful group.

Time does not permit a thorough discussion of all the varieties of maladjustment that could be constructively dealt with, but we must not forget the chronic alcoholic who is frequently a very useful person during his sober intervals and who is susceptible to a good deal of help, despite the rather pessimistic attitude that is frequently expressed to the contrary.

To further illustrate the usefulness of a psychiatric orientation to personnel problems, I should like to discuss two conditions which are timely and are of maximum importance to production, namely, accidents and absenteeism.

An accident is defined as an unforeseen, unfortunate event. No one can deny that an accident is unfortunate, but it is equally true that an accident can more often be foreseen than not because an accident is a symptom. Few injuries are caused by machine or equipment failure. By far the greatest number of accidents can be attributed to man failure which can be traced to one or more specific causes.

First on the list should be unwise employe selection and placement. It is not only important to consider manual dexterity and training, but it is equally vital to think of the emotional makeup of the person to be fitted to the machine. In passing it might be mentioned that it is poor placement to put a speedy worker on a slow machine or vice versa. It is equally foolish to try to use an individual with poor coördination at an operation that needs great deftness. There are many people who are obviously lefthanded, and I presume that the matter of lefthandedness is understood in machine operation, but there are a far larger number whose lefthandedness is not nearly as obvious and who do not themselves recognize this confusion in handedness. Certainly this poorly established hemisphere dominance and its relationship to accidents needs further study and research.

Accidents are also caused by inadequate training which leads to carelessness, because the employe does not appreciate sufficiently well all the implications of the work that he is performing and has had an inadequate period of time to become proficient.

The effect upon the accident rate of fatigue, boredom, dullness of intellect and postalcoholic incoördination is well known. Too often these problems are dealt with in a general rather than in an individual way.

Of the more obviously mental causes the most universal, and therefore the most important, are personal and family difficulties which we loosely term as worries or worry hazards. Thoreau recognized the universality of this problem when he said "The mass of men lead lives of quiet desperation." The worker who has a problem involving his family constellation, whether it be a marital difficulty, a love affair gone wrong, or whether the children are occasioning worry because of behavior or health, is only partly at work in the shop. Most of his ability is taken up with preoccupied brooding and much of his energy is lost through anxiety and concern. Everyone is beset by some problem or other most of the time and becomes very disturbed occasionally by crises in his emotional and situational environment which are susceptible to relief and guidance, if the difficulty is recognized and suitable advice is given.

Then there are those employes who have rather deep personality difficulties which cause them to become accident prone. One type is the individual who has, as a symptom of an emotional difficulty, the need to get hurt. To put it in another way, some emotional conflicts cause a compulsory need for punishment. What better way is there to obtain relief in an industrial plant than to be hurt by a machine? There are those, too, who are always having minor accidents merely for the attention it centers about them. Individuals who often go to first-aid stations for minor cuts and bruises are certainly proper subjects for personality study. Frequently there are workers whose conflicts require that they create an acceptable excuse for failure, because they are too conscientious to give up work which they intensely dislike. An accident unconsciously motivated is a satisfactory answer to them, because they can feel quite honestly that they are prevented from working by a situation for which they cannot be blamed.

It is equally plausible that chronic boredom will be a sufficient motivating cause for minor accidents. The unconscious reasons that perhaps they will be put on a different operation when it is found that they are always getting minor in-

juries. Then there are those who have accidents to punish someone else. Perhaps the person to be punished is a member of their own family, or perhaps their childhood has made them very hostile to authority and direction. When the shop supervisor has need to be arbitrary, abrupt and emotionally cruel, the unconscious answer to this is to have an accident which, in effect, says "You made me do this."

It would be interesting to make a study of the reasons why some workers will not use safety devices, particularly those designed to protect the eyes or the lungs. Many workers have no difficulty with such devices, others cannot seem to work efficiently when they are in place. Could it be that these individuals are people who have tendencies in the direction of claustrophobia, or is it perhaps that some of them have a sufficiently strong need to be hurt that they must repudiate any device which would prevent them from being hurt? Some, of course, react in a negative way because they are immature and reject any form of authority or any rules or regulations no matter how intelligent.

Enough has been said to indicate that there is a specific need, especially now, of doing more than attempting to solve the accident problem in a group way. There is no single solution. General educational programs notwithstanding, every case has to be dealt with as a problem in itself.

Absenteeism is also a matter of great concern that cannot be dealt with successfully as a group problem. True, we find that absenteeism is sometimes caused by factors which have to do with plant operation such as stock piles. A worker who knows that his department will soon complete work on the available stock pile is not likely to work as fast as he can to bring about his own layoff. It would seem to me that the cure for this particular problem is to explain to all of the workers some of the difficulties of management, putting emphasis on changes in design, reallocation of materials, etc. We fail to sufficiently realize that people as individuals are fairly reasonable and that if they have sufficient knowledge about a problem they are more likely to act constructively. Many of our difficulties of interrelationships are due to ignorance which could be rather easily corrected. In passing I might suggest that it is very poor psychology to leave the products of a plant which is working at high speed too close to the factory. The workers see the products accumulating in warehouses or fields and come to the conclusion that there cannot be any hurry for the products or they would be put to use and not be allowed to pile up in large amounts.

War Effort

There is also the difficult job of getting the worker to identify himself emotionally with the war effort. He must be made to feel an indispensable individual who has more responsibility than a mere cog in a wheel. He should know what his product is being used for. He should have an opportunity to see the finished product in operation, and he should be informed of military actions where the use of the product has been of extreme value. A plant is very much dependent for its morale on its executives—more than is generally supposed. If the executive group is full of anxiety, confusion and irritability, this emotional attitude will permeate, sooner or later, the whole organization. Many executives become rather fatalistic and unduly discouraged because of war regulations which are both wise and unwise. Apparently shop bureaucracy and red tape become unbearable when the burden of government forms and regulations is added. Cynical, sarcastic attitudes develop which may become serious saboteurs of the war effort. Fault-finding, when verbalized, is in some measure good psychotherapy because it relieves unbearable tensions, but, like most medicine, it is not good when used continually or in too large doses. I am inclined to think that some disturbances of morale are definitely traceable to the executive department because of their own emotional and environmental problems. I am also satisfied that the same may be said of maladjusted supervisors who would be much more effective if they had some psychiatric help.

Fatigue is a very common cause of absenteeism, although the worker will not very frequently admit this. He is more likely to have some other excuse. He is afraid if he reports that he is too tired to continue he will be considered too tired to work in the plant at all. The employment of women necessitates the very careful study of this whole subject of physical and emotional fatigue.

Monotony is an important saboteur. The employe who is not emotionally identified with the war effort gets so bored doing the same thing hour after hour, day after day, that he becomes

"fed up" and takes, as a cure, a short, unauthorized vacation. It is true that human beings feel secure and comfortable in a routine which is manually and emotionally satisfying, but even under this optimum condition the average person requires a change from time to time. In this connection, some thought ought to be given to the relationship between the shift worked and absenteeism. Workers have difficulty in getting their private affairs taken care of, because the shift to which they are assigned is quite unsuitable as far as their home life is concerned.

Then there are the personal worries and anxieties of the worker which were mentioned with reference to accidents. Most workers when they report concerning their absence are inclined to cover up the real reason and to attribute their staying away to "sickness," feeling that the proper explanation will be unacceptable or would be too involved to give. A surprising number of employes report that they are absent because they are ill, the illness usually covering not longer than one day. It may very well have been true that the employe was sick, but who knows whether he was sick of life, sick of being in love, temporarily sick of whisky, sick of his job, sick of his annoying children, or sick of his income tax.

I believe that every effort should be made by the personnel department and the plant physician working closely together to arrive at a better understanding of the employe whose absenteeism is attributed to this cause. The results would be surprising and constructive. Numerous people develop illness as a neurotic symptom and any employe who is chronically away should be considered from that point of view. We are too prone to assume that all absenteeism is a sign of carelessness, irresponsibility, and poor morale. We should bear in mind that any increased environmental pressures, such as this war has brought about, are going to make much more evident the personality quirks and difficulties of us all.

It is idle to expect to solve the problem of absenteeism without realizing that there are many causes of this state of affairs. We must concern ourselves with the individual man who has been absent. Certainly absenteeism is a symptom like headache. Both are pains in the head, and both are symptoms of a multitude of afflictions.

It is recognized that there are not sufficient psychiatrists who have the industrial point of view available at the present time. Indeed, there probably never have been, but I do not think that this whole program should or can wait for the further development of this specialty. Mental hygiene, psychiatry, and psychology have an involved terminology, some of it constructed to camouflage half-facts and gaps in our knowledge. But this "lingo" *can* be translated into common phraseology; the general principles *can* be utilized by any individual of average intelligence.

Early in the deliberations of the Michigan Industrial Mental Health Council it became apparent that a great deal could be accomplished if those working in industry, whether they be managers, supervisors, or employes, had the psychiatric point of view. Many personnel men are skilled in the art of dealing with human beings. Many supervisors are interested in the employes under them as people as well as from the standpoint of units in the machine production. These are notable instances already of the practical appliance of mental hygiene in industry. A simple plan has been suggested by the Council which, if used in any plant, can bring about an extension of this point of view. The core of the idea is to teach supervisors more about human behavior during their training courses and in their shop conferences. This will inevitably bring about a better understanding between all those employed in the plant. This awareness will make it possible for medical and supervisory departments to recognize the worried worker and to suggest to him a means of alleviating his distress. When an individual is interested in another as a "person," sudden changes in behavior are apparent immediately, and if there is a certain warmth of relationship between the supervisor and his group, it will be easy to suggest to the worker that he go to the plant physician or the personnel director for guidance. Communities have many resources which can help a worker in his difficulties either with himself or his family, but he must know about them and be guided to them. As an example of this approach, I cite the financial help and advice that a number of concerns give to their workers. However, not enough is done about other family and psychological difficulties.

The slogan "Man to Man on the Job" is vitally

necessary in peace and indispensable in war. Industry can look forward to an increase in personnel difficulties, not only because the need of armed forces will take increasingly more workers from labor's ranks, but because the replacements are likely to be made up, to a considerable degree, of those who are deemed unsuitable for induction. Many industrialists are hesitant, even panicky, concerning the employment of women. This means that management must learn to work with them and will have to adjust procedures and routines to their needs. The effort will be difficult and some executives may end up by having to employ one or even two psychiatrists to rid them of their own anxieties and fears. Perhaps Dr. Lee will have to write a new book called "Women to Women on the Job."

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Evaluation of the Handicapped Worker for Employment in Industry*

By Edward P. Chester

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Several weeks ago when Dr. Markuson asked me to meet with you, I naturally felt it was a great privilege and honor to participate in your program. I looked forward with a great deal of interest to this important conference, being assured there was far more to be learned through association with you than to be contributed by my paper.

However, when Dr. Markuson later requested that my paper be prepared in advance so that it might be discussed to better advantage, and especially when he listed the names of the important personages who would lead the discussion, my troubles really began. They were not lessened much by the fact that the day on which this paper was prepared was a beautiful Sunday, and thoughts of pressing early spring activities calling me out-of-doors were hard to control. Probably my colleagues on this program were stronger-minded than I, and experienced no such difficulty.

In these critical days all of us are so busily engaged in finding ways and means of getting our work done, there is too little time available either for recording the evolution of programs developed to meet specific situations, or for a critical evaluation of results. What I have to say, therefore, does not in any way constitute a treatise on the employment of the handicapped, nor do I presume to indicate that in my state of Connecticut, we have discovered the answers to all the problems involved. In fact, I am planning to spend several days here, hoping to have the opportunity of observing the progress that has been made in this great industrial area in regard to the utilization by some of your large plants of special groups of the handicapped, especially the epileptics. If there are medical directors of plants that use such workers present, I will greatly appreci-

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ate their giving their names to Dr. Markuson or Dr. Selby, if they are willing to give me an opportunity tomorrow or Saturday to observe the conditions under which epileptics and other special groups are employed.

I am meeting with you, therefore, as a learner, and my paper will deal with certain phases of employment of the handicapped, especially relating to the attempts of our Connecticut Rehabilitation program to devise effective methods of evaluation for, and ultimate placement of these workers in our war industries.

Nearly twenty years ago, I had occasion to place a young negro who had vision in one eye only, as a porter in a radio manufacturing plant. Several weeks later he was transferred to a better skilled job. The operation he performed along with a number of other workers was the adjustment of bearings and the alignment of plates of radio condensers. These workers were seated facing a small beam of light that came from a lamp concealed on the table in front of them. Otherwise the room was dark. Closing one eye and sighting through the plates, these workers made whatever adjustments were necessary. Meeting my man later, I asked, "Sam, how did you get that condenser job?" His answer surprised me. It was, "Well, I told the boss I could do more work than the others because I didn't have to waste no time shuttin' one eye." Through the coöperation of the employer, Sam had been placed in a selected job, where the physical defect was not a handicap to competitive performance.

Employers in my state have been intensely interested in the article by Edsel Ford in a recent issue of the *Saturday Evening Post,* entitled, "Why We Employ Aged and Handicapped Workers." They agree with the opening statement he makes, that "war at the combat line brooks no infirmities in men. The soldier in a plane, a tank or a fox hole must be a thoroughly sound and sturdy physical being. But at home on the production line that bulwarks the fighting front, we are rapidly discovering that the handicapped man may be a splendid production soldier." Another statement which Mr. Ford makes in his article, that "Our real assistance to (handicapped workers) has been merely the discovery of tasks which would develop their usefulness," indicates the original purpose of our Connecticut Rehabilitation Clinics, and substantiates the interest of Connecticut Industry and Industrial Medicine in their development.

Long before Pearl Harbor, our Rehabilitation Service in Connecticut realized that every possible effort should be made to speed up the processes of rehabilitation and to expand the services available so that a large number of handicapped persons might be prepared vocationally for jobs selected on the basis of the physical and mental abilities required in their performance.

Industry tests and rates the quality of its machined product, indicating the capacity range and the working conditions under which most satisfactory results may be obtained from its use. Each type of machine used in production has its special purposes and peculiar limitations. These machines are selected in accordance with the job to be done. Some serve only a single purpose while others accomplish a wide variety of operations. Does industry refuse to use "single-purpose" machines, insisting that every mechanical device in the shop be "all-purpose?" The answer is obvious. Production schedules could not be maintained without them.

Probably the largest proportion of physically handicapped workers, like the machines they operate, are somewhat restricted to performance within certain limits. Some of these workers may be termed "single-purpose." Their work capacities—good within the limits prescribed—are confined to a variety of specific single operations. They must work to close tolerance as far as physical activity is concerned.

Pre-employment medical examinations are used as a basis of determining the work capacity range of all these physically handicapped potential workers, rather than as a basis for exclusion. Some medical examiners believe they can rate the "man power" of the person applying for work as scientifically as the engineer in the laboratory rates the "horse-power" of the machine he tests.

An electric motor would not be rejected as unserviceable if tests indicated it could give satisfactory and continued service as a one-fourth horsepower product, but could not be rated higher. A large field of use for motors of that capacity exists. Such a product would be rated in accordance with the work it could do safely and satisfactorily and these conditions would be indicated in the instructions to the user.

The experiment made to test, rate and inform industry as to the available man power of po-

tential workers for the war effort in the ranks of Connecticut's army of the physically handicapped furnished the foundation for the plan of "Man Salvage Clinics," which were unexpectedly published in *Reader's Digest,* August, 1942.

About two years ago, the Manufacturer's Association of Connecticut anticipated the need for man power and sponsored a program to meet the situation. Various committees were formed, one dealing with "Employment of the Physically Handicapped." Representatives of the State Employment and Rehabilitation Services were appointed to work with this committee. Sub-committees of local manufacturer's Associations were formed in the larger areas of the state. Lists of available handicapped workers were submitted to these local associations. Many persons were hired, and are now working in war production as the result of this program. As the war situation became more acute, it seemed desirable to find a means of intensifying this effort. Since the search for workers would presumably reach deeper into areas of physical imperfections, formerly not considered as possible sources of man power for the war effort, the idea of conducting Rehabilitation Clinics in the larger industrial centers of the state was developed. This idea was presented to and endorsed by the Manufacturer's Association of Connecticut. It was then discussed with the Connecticut State Medical Society and the Department of Psychology at Yale University in New Haven and Trinity College in Hartford.

The original Rehabilitation Clinic plan was simply a combination of medical, psychological and employer guidance to determine the "man power" of groups of physically handicapped potential workers, in order to ascertain the action to be taken to fit them into suitable jobs on the production line in the shortest possible time. To put it another way, the plan had as its purpose the securing of the widest possible utilization of men and women who, because of physical handicaps had thus far not been able to contribute to the war effort. It was believed that a large proportion of these persons were employable in selected jobs and under certain conditions. In order to convey a more complete picture of the Rehabilitation Clinic program, it may be well to describe a Clinic in action.

The first Clinic was held at New Haven Hospital on Sunday, March 15, 1942. Four groups of five physically impaired persons each were selected a week in advance for presentation to this Clinic. Each group comprised as wide a range of impairment as was possible to secure in the fields of visual, arrested tuberculosis, orthopedic and cardiac defects. Several days prior to the Clinic, this group of twenty persons was called to the Clinic headquarters in New Haven for preparation of complete information regarding the personal, educational, social and work histories of each client. This was part one of the Clinic procedure. At that time the members of the group were advised as to their part in the Clinic program, and a schedule of interlocking medical and psychological examinations was made for the coming Sunday.

In the meantime the Manufacturers' Association of New Haven County had been consulted and invitations extended to its membership to participate in the Clinic program. A special committee of personnel directors from twelve local manufacturers was organized. These representatives were personally contacted by Rehabilitation officials, were given as complete information as possible regarding the Clinic plan, and their advice solicited concerning the method of operating the initial Clinic.

At the same time the State Medical Society was consulted regarding medical procedures to be observed, the appointment of one of its members as Clinic Medical Adviser, the selection of a group of medical specialists to conduct the physical examinations, fees to be paid for these services and similar details.

One day of the Clinic, Sunday, March 15, the group of twenty clients reported at 8 a.m. to the Clinic headquarters in the Institute of Human Relations at Yale University. Here the Department of Psychology of Yale University began the series of tests which had been selected to furnish the basis for determining the intellectual capacity, special aptitudes, social attitudes, and motor skills of the clients. This was part two of the Clinic procedure. Luncheon was provided the Clinic group in the dining room of New Haven Hospital following which the series of physical examinations were conducted in a suite of clinic rooms made available by the hospital. These examinations constituted part three of the Clinic procedure. As soon as their physical examinations were over, certain clients reported back to the psychologists for the completion of special tests

determined advisable on the basis of the preliminary tests already administered. By 2:30 p.m. the results of both the psychological and physical examinations had been recorded, and the group adjourned to the Clinic headquarters to complete part four of the Clinic procedure—the Employer Conference. For this purpose two large adjoining rooms had been reserved, the clients occupying one, while the Clinic officials and participating employer representatives used the other as the Clinic chamber. Here two large conference tables had been placed end to end. At the head of the table were seated the medical and psychological advisors, several members of the Rehabilitation staff, local representatives of Workmen's Compensation, Defense Training, and U. S. Employment Service.

A brief statement by the Conductor and the Clinic is under way. A member of the Rehabilitation staff reads the record of the first client's personal and work history. The Medical Adviser then gives his interpretation of the medical findings.

"This man presents a case of arrested tuberculosis. He is physically able and ready for a job under certain work restrictions. He should not ordinarily be subjected to lifting over thirty pounds nor to do work which habitually requires the use of hands above the level of the eyes. He can work safely and without danger to his health on either the first or second shift. He should not work on the night shift from 11 p.m. to 7 a.m. His work environment should be comparatively free from accumulated dust or dampness."

Next, the psychologist makes a statement of the client's mental equipment:

"Intellectual capacity just a little above average; superior mechanical knowledge as well as mechanical aptitude; clerical aptitude is average, perhaps a little better than that; good hand and finger dexterity. This man in my opinion is a good candidate for training of almost any kind. He will learn easily. He could probably handle a job at present with some 'breaking in' at the place he would work. I think he might make a good inspector or time-keeper—jobs of that sort, where a combination of both mechanical and clerical abilities or knowledge may be required."

The Conductor asks the group if there are questions the employer representatives desire to ask of the medical adviser, psychologist, or Workmen's Compensation Commission before admitting the candidate for interview. The candidate enters, stands facing the employer group and is introduced. "What type of job do you feel fitted to fill in a war industry," the Conductor inquires. "I could do bench work, or be a clerk. I have never run a machine, but would like to learn." An employer asks, "Do you know how to use a micrometer?" "No, but I could learn."

After a five-minute period of further questioning regarding knowledges and skills used on former jobs, why these jobs terminated, etc., the client was dismissed. He was notified that he would be recalled after a decision had been reached on his case. After the client had left the room, the Conductor states, "Gentlemen, you sit as a vocational jury to determine whether this man can be used in war production now; whether training or other preparation will be advisable first; the type of job he could fill to advantage; and whether the skill to handle the job can be provided directly on the job. Who has the first suggestion to offer?"

And so it goes, case after case. Sometimes the verdict is training, occasionally recommended provision or repair of an artificial leg, arm or hearing aid. Many times one or more employers agree to see the client at their offices the next morning. The client with arrested tuberculosis secured a job as Production Checker. Other clients presented included a lad of twenty-nine, with badly crippled legs as the result of polio, who had never worked; an elderly shoemaker, wearing an artificial leg of the vintage of the "one-horse shay," and who had been on WPA as a laborer for years; and a Veteran of World War I, a cardiac. The lad of twenty-nine, practically homebound for years, had developed a hobby of woodworking. Family and friends had aided in providing him with a fairly well-equipped home workshop. Articles made in the shop had been given to friends, not sold for profit. He had become expert at wood carving, and brought to the Clinic samples of his craftmanship. Intelligence, interest and ambition showed in his face; his hands and fingers were nimble. These facts overshadowed the mishapen legs supported by crutches. After the employers had examined the samples of his work, the questions began. "Do you work from drawings?"; "Can you use gauges?"; "Could you run a milling machine?" and so on. The verdict was training, with prospect of a definite job at its successful completion. The training was to be in the field of blueprint reading and the use of precision gauges, and the

job that of model maker for a prominent electrical goods manufacturer.

Then a final question was raised—transportation, for the lad could not manage the usual facilities. His quick smiling reply, "I'll set up a cot in the shop." Everyone seemed in agreement with the final decision, that the station wagon of the Connecticut Society for Crippled Children would provide transportation to the place of training. After the job had been secured a fellow worker could take him by automobile to the shop. The plans for this lad were not made by the group out of sympathy—far from it; out of interest, yes—interest in providing a real job, a paid job, a job some worker needed to fill, a job this lad could be trained to fill capably, in spite of his physically impaired legs.

The shoemaker had never worked in a shop, but for years had operated shoe repairing machinery, in addition to his hand shoe repairing skills. It was determined that such experience could be used as a basis for learning handfiling, and that "Break-in" training could be given on the job. After assurance had been indicated that this client should report for work the following morning, he was measured for a new artificial leg, with quick delivery promised. The rate of pay? The same of course as that paid the able-bodied for similar work. Filers sit to do their work and, therefore, the fact that this man had to sit because of his defective leg, in no way presented a restriction of activity which would slow up his production.

The cardiac veteran secured an opportunity as a guard in a war production plant. Knowledge of the use of side arms was one requisite for such a job, and the physical defect was judged not to be a barrier to successful performance of the duties of the job, nor likely to become aggravated by the activity involved.

The Clinic just described was the first and last held on Sunday. When arrangements were being made for the second clinic, the local manufacturers' association decided that attendance by employer representatives should be on company time and, therefore, on a week day. Also the plan of conducting both psychological and medical examinations on the one clinic day has been discontinued. Such a procedure allowed practically no time for the Rehabilitation staff to study results and evaluate the total findings prior to presenting these facts to the employers. From thirty-five to fifty persons are now assigned for psychological testing in small groups. Medical examinations are arranged likewise either before or after the testing program, and are conducted at the offices of the doctors selected.

Another change from the original Clinic, is the addition of the "Clinic Follow-Up." This is really part five of the Clinic procedure. All clients presented at a Clinic are now requested to report the following morning at the Clinic headquarters. Here are assembled for the purpose of carrying out the Clinic recommendations, members of the Rehabilitation staff and one or two representatives of the Physically Handicapped Placement Section of the local office of the U. S. Employment Service. The first clients to be reinterviewed by these officials are those whom employers agreed to see at their employment offices. These clients are officially referred to employers by the Employment Service representatives They are notified either to return to Clinic headquarters after an interview with the employer, or to telephone the results if immediately placed at work.

The next group to be reinterviewed represents clients for whom training was recommended. After necessary action has been taken on these, the clients requiring provision or repair of artificial appliances are interviewed.

Finally the small balance of the group requiring specialized placement services or further medical and/or psychological study are interviewed and appropriate action taken. Employers not present at the Clinic or other coöperating agencies are contacted by telephone and every attempt made jointly by Rehabilitation and Employment Services to effect a suitable adjustment of each client's case.

Clients remaining unadjusted at the end of a usually long "Clinic Follow-Up" day are those with no special experience or aptitude for even low-grade semi-skilled work. Neither are they suitable candidates for training to develop skills useful in war production. In general, this latter group represents persons who may have physical defects, but unfortunately these are not the real handicaps to successful performance in most types of employment. These persons are usually referred to other agencies that may have facilities for the type of treatment needed.

The function of the Clinic Medical Adviser is an important one. The Connecticut State Medi-

cal Society recommended the Chairman of its Committee on Industrial Health for this position. Occassionaly the duties are assigned to the Medical Director of a local industry or to one of his associates. Such an adviser is familiar with industrial medical practices and for this reason, his interpretation of positive physical abilities of clients presented to clinics is of great value.

Workmen's Compensation regulations and Insurance Company restrictions are sometimes reported to be barriers to the employment of the physically handicapped. Because of work conditions peculiar to a few specific industries, there are to be found in Connecticut, as no doubt elsewhere, restrictions which do limit the acceptance of certain types of physical impairments for employment in certain parts of those particular industries. However, even these industries do accept a great many physically handicapped workers, and the few that are barred can be placed elsewhere. It can be safely stated that no physically handicapped person who possesses sufficient physical ability to perform a selected job, who has average intelligence and reasonably good habits is denied an opportunity to work in Connecticut. Judge Leo J. Noonan, Chairman of the Board of Workmen's Compensation Commissioners in Connecticut has been one of the leading advocates of the philosophy that a man who has suffered an injury is a more careful worker thereafter, and therefore the employer assumes no unusual risk in hiring him.

The Connecticut Workmen's Compensation Act adopted in 1913 and as subsequently amended, makes special provision for the employment of persons with special defects without imposing an unusual hazard upon an employer or depriving the worker of any rights to compensation unless an injury sustained in the course of employment is determined to be attributable in a material degree to the physical defect of the worker. Form No. 37-B of the Workmen's Compensation Commission of Connecticut, "Waiver on Account of Physical Defect," is quite generally used by employers when hiring physically handicapped persons.

In general, the results of the Clinics held since March 15, 1942, have been approximately the same. About 70 per cent of the clients have been placed; 20 per cent referred for training, with placement deferred; 5 per cent have required provision or repair of appliances; and 5 per cent have required further medical or psychological study, with a poor prognosis as regards any suitable adjustment into competitive employment.

Although many handicapped workers have been placed by the Clinic process, the clinics really serve as a basis for a better understanding of the usefulness of this special labor pool, rather than as a means of placing the particular workers evaluated and interviewed. In other words, the candidates presented at clinics represent types of handicapped workers who may be made useful to the war effort. Development of interest and attitudes which would lead to a greater utilization of this special labor pool was the original clinic purpose. The Rehabilitation Clinic has represented a democratic learning process for all participants involved.

Until recently the rehabilitation services of the State of Connecticut, aside from supplying artificial arms, legs, braces or hearing aids where required for improved performance on the job, were entirely vocational in nature. From time to time, during the past few months, it has been called to rehabilitation attention that workers were being rejected for jobs they could otherwise satisfactorily fill, because of the presence of some physical defect which could be corrected in a relatively short period of time by proper surgical or medical treatment. There has been no authorization for the expenditure of rehabilitation funds for such physical rehabilitation, but it has been possible to arrange with private agencies in a few instances for the correction of some of these defects. Dr. James H. Biram, Medical Director at the Colt's Patent Firearms Company in Hartford felt there was urgent need for a program of this type as a means of increasing the manpower of the Colt plant. Dr. Biram stated his case so sincerely and convincingly that the only answer the Rehabilitation Bureau could give was an immediate decision to tackle the problem on a trial basis. Believing that other industrial plants would be interested in the plan, a meeting of representatives of Industrial Medicine, the General Medical Profession, Hospitalization, Workmen's Compensation, Industry and Labor was called to consider the value of this phase of rehabilitation as a means of increasing manpower. As a result of this meeting attended by about fifty persons, and subsequent meetings with smaller groups, the "Connecticut Wartime Manpower Rehabilitation Committee" was formed, which serves in an ad-

visory capacity to the Rehabilitation Bureau of the State Department of Education. This committee voted that an immediate attempt be made by the Rehabilitation Bureau to correct such defects as could be treated in aproximately two weeks' time found in the pre-employment groups being examined by plant physicians throughout the state.

A group of consultants selected from various parts of the state was determined advisable as a means of more effectively inaugurating this new program. These persons were requested to serve as consultants in the fields of their special interests, covering Medical Policies and Methods, Industrial Medicine, Hospitalization, Workmen's Compensation, Employer Relations and Employee Relations. The chairman in each of the above fields, together with the general chairman, serve as the Central Committee.

Creighton Barker, M.D., Executive Secretary of the Connecticut State Medical Society serves as Chairman of the special committee on Medical Policies and Methods. Without his encouragement and assistance, neither the Rehabilitation Clinic program nor this later one of Physical Restoration could have been successfully inaugurated. Under the leadership of the State Medical Society, a statewide panel of doctors has been selected to coöperate in providing various types of surgical or other corrective procedures.

Payment for services to these physicians is on the basis of the lowest Workmen's Compensation rates for similar treatment. Hospitalization is arranged on an individual basis, and the hospital selected by the worker is paid the compensation semi-private rate. Payment of both medical and hospital fees is made from Rehabilitation funds. Repayment of these costs is arranged through a series of weekly installment payments made by the worker after beginning employment.

In the event a worker is inducted into military service after correction of the defect, the balance due the state is cancelled.

As to the types of defects to be considered, it was felt that at least for the present, the corrective procedures would be limited to the pre-employment group, and would consist of correction, reduction or further examination and report by medical specialists, covering the following defects:

Cardiac conditions and hypertension
Varicose veins
Hernia
Vision
Back conditions
Foot conditions
Diabetic conditions
Miscellaneous

This corrective program has been in operation only a few months, is still being conducted on an experimental basis, and is too new to give an accurate accounting as to accomplishments. However, about one hundred workers have been provided corrective services and are employed in war production as the result. Repayment schedules are being maintained very satisfactorily by the workers. The medical director of one plant stated that more needed manpower had been obtained by the corrective process than from any other source.

For some reason, I hate to use the word "Aged." At the conclusion of a talk at a Rotary Club recently in my state, an older member who was hard-of-hearing asked if he could be of any use in the war effort. When he said he was 82, I told him he was too young. Through our clinics we have placed a number of men over 70, and I believe the top was 86. It is difficult, therefore, to discuss employment of the so-called "aged" group worker in terms only of the number of years he has lived.

We are interested in these "oldsters" in Connecticut, from a rehabilitation consideration. I think rightfully so, since most of them have an employment handicap, if not some specific physical one. There is a lot of life in the groups, and it can be made extremely useful to the war effort under certain conditions.

In dealing with older groups, as well possibly as with younger ones, might it not be feasible to have medical age norms established, so that a person could be classified as to age, in terms of physical capacity rather than of chronological age? We all know there are workers of 20 whom an employer would gladly exchange for a person much older. And there are persons who have actually lived 60 years, but possess the vigor and physical capacity of a much younger person.

Perhaps medical science has already developed a procedure that can be used by industrial medical men in evaluating the effects of age on physical fitness and by such a procedure assign to the person a "comparative" age. Perhaps this is not the right term to use, but I am sure you know what I mean. If such a procedure is not avail-

able, is not this a problem to which Industrial Medicine might well give thought? "Comparative" age tables, it would seem to me, would be of great value to industry, especially now.

My assistant, Fred Novis, is making a study of factors involved in the successful adjustment of the handicapped. In a recent preliminary report to me on this subject, he makes some statements which may be of interest to this audience. I will quote briefly from this report.

"If we can say of a man that he has good physical capacity, good aptitude and good occupational experience, we can also add that very probably that man is successful, or may be quite easily adjusted.

"Industry is concerned with the total individual and his ability to produce satisfactorily under given conditions, but calls upon the doctor for the medical facts, and upon personnel men and psychologists for the measurement of aptitude and for determination of occupational fitness. These specialists really reveal three Quotients of Adjustment:

1. Physical Quotient
2. Aptitude Quotient
3. Occupational Quotient

"In the adjustment of the physically handicapped we are immediately confronted by the problem of physical limitations or a lower physical quotient. This physical quotient should describe in positive terms the individual's functional capacity. The war with its accompanying demand for a wider labor market, including the young and old, the able and the physically handicapped, has illustrated that a person's age or his physical defect may not be a true indication of physical ability to produce satisfactorily under given conditions.

"For those who are restricted by a physical defect such as limited use of an arm or fingers, it would be of inestimable value to have a functional study of occupations. Studies of movement of arms and hands required in a variety of occupations would be helpful. Studies of activity, such as lifting, bending, walking, auditory and visual acuity would also be helpful in the adjustment of those with a lower Physical Quotient in a particular capacity.

"A careful medical study with emphasis upon positive functional physical capacities should reveal few physically handicapped persons who would be labeled as unemployable.

"Our second quotient, termed here as the Aptitude Quotient, is fully as important as the Physical Quotient. The importance of aptitude and more particularly intellectual capacity as a factor of successful adjustment is well known.

"There are generally three ways in which we can recombine the Quotients of the physical, aptitude and occupational factors to help effect an adjustment of the physically handicapped.

1. Accept capacities as they are and by vocational guidance direct the individual to an occupation which he can satisfactorily perform.
2. Correct or improve the capacity, by medical, surgical or prosthetic aids.
3. Renew, strengthen or make new skills by training.

"Thus Rehabilitation centers about the Quotients described and may be defined as a *science* which aims to effect an occupational adjustment through the recombination, correction or strengthening of the physical, aptitude and occupational quotients."

What should be the relationship between Industrial Medicine and Rehabilitation? I really don't know which service should be part of the other. The two services are inseparable, and will continue to be more so as we approach the post-war period. By close association an immediate and lasting contribution can be made to the war effort and to society. Industrial medicine can pave the way for a more complete understanding throughout industry of the potentialities of workers with various kinds of defects. Rehabilitation in all states, in my opinion, should have the facilities to aid in the correction of physical defects, in addition to facilities to improve vocational fitness of potential workers.

May I, therefore, respectfully suggest a new committee in the Medical Societies of our states. Call it by whatever name you will, but let it be the medium with which the Rehabilitation agencies of the states may pool their efforts toward an ever-increasing effectiveness of the total program.

I have enjoyed this privilege of meeting with you, and in closing may I present the last paragraph of a full-page editorial in "Connecticut Industry" written by Mr. A. C. Fuller, President of the Manufacturers' Association of Connecticut.

"Follow-up reports about the work of the physically handicapped who have been placed have been glowing and heartening. Bitter as are the normal fruits of war, the achievements attained during the past nine months in rescuing thousands of disabled men and women from a lifetime of dependency and despair, should instill in every employer a missionary zeal to help spread this 'silver lining' to the greatest possible number of physically handicapped persons now and during the future era of peace. No devotion to this great cause of rebuilding shattered lives can be too great, none more soul satisfying and fruitful, even in terms of material rewards."

Gentlemen, it is a challenge to me to work in a state where industry and medicine, as well as my own Department of Education take such a great interest in our program of Rehabilitation.

Medical-Legal Phases of Industrial Employment of Handicapped Workers*

By L. J. Carey, LL.B.

General Counsel Michigan Mutual Liability Company

Detroit, Michigan

I FEEL highly honored to be selected as a discussion leader at this meeting of the Postgraduate Industrial Medical and Surgical Conference, sponsored by the Committee on Industrial Health of the Michigan State Medical Society.

Being just a little uncertain as to the scope of this discussion as indicated by the program, I made inquiry from your general chairman, Dr. Markuson, and was informed that discussion of these legal phases of industrial employment was understood to be strictly in connection with the symposium on the employment of the handicapped worker.

We have heard two very excellent papers on this subject and I feel that it is quite an intrusion for me to attempt to inject legal theories and perhaps even legal obstacles into any plan for progress in this field in the State of Michigan. The detailed information brought to us by Mr. Chester on the operation of the Rehabilitation Clinic in Connecticut is instructive and informative.

There is evident a spirit of coöperation between the medical profession and industry and labor to accomplish a great objective and we should be able to overcome any legal difficulties that might impede the path of progress toward a similar objective in Michigan.

Mr. Chester comes from a state where the people, through legislation, have provided a means of removing one of the principal legal barriers to such coöperation and progress by means of legislation on the question of waiver regarding which I will comment more at length a little later. I am particularly impressed with the manner in which the Medical Society has taken the leadership in aiding the Manufacturers Association in the organization of this Rehabilitation Clinic and then in following through to see that its operation was made effective.

The principal legal impediment to employment of handicapped workers is the realization on the part of employers that their liablity for injuries to such workers is greater than it is in the case of the normal employe. Perhaps I can use the word fear rather than realization. There is some question as to whether there is a greater liability existing over all or at least you could say there are various schools of thought on this question. As has been previously indicated, some administrators of compensation laws take the position that a man once injured makes a better and safer worker than one who has not received a seriously disabling injury.

It can be stated that as a general rule an employer is responsible for the increased disability due to any aggravation of the afflictions of such persons due to an accidental injury or an occupational disease. Our Supreme Court in Michigan held many years ago in the case of Hills vs. Oval Wood Dish Company that an employer takes an employe as he finds him and if he is suffering from some affliction, in that case, syphilis, and such condition interferes with the normal period of recovery and thus prolongs the disability, that the employer is liable for such prolonged disability. Likewise our Court has held in numerous instances that where one is suffering from such afflictions as heart ailments, vascular changes, etc., that if the accident which he received is a contributing cause to his death, the employer is liable for the death benefit.

Many employers feel that if they employ a person suffering from a heart ailment, vascular disease, epilepsy or a condition of that type that even if the disease itself is the cause of an injury while a man is engaged in the course of his employment that they will be held liable for such injury. Technically this is not true and we have numerous Supreme Court decisions in our own state holding that where the injury the man received is due solely to his affliction that the employer is not liable for such injuries. For instance our Court has held that where a man, subject to epileptic seizures, fell from a scaffold where he was working as a result of an epileptic seizure (no other accidental happening occurring), and as a result of his fall he received a fractured skull from which he died that such an occurrence is not an accident arising out of his employment and that therefore the employer is not liable. Similar holdings have been made in heart ail-

*Presented at the Postgraduate Industrial Medical and Surgical Conference, April 8, 1943, Detroit, Michigan.

ments and cerebral conditions. However the employer has a very well grounded fear that regardless of this technical ruling, the matter of proving that a man's fall or injury was due entirely to his physical condition is one which is very difficult.

Therefore, some employers have definitely refused to hire handicapped workers. Others, not having the fortitude to face the question themselves, have passed the buck to their insurance companies by claiming that their insurance companies have advised them not to hire such persons or have told them that they would cancel their risk if they did so. The question is frequently asked an insurance company by an employer as to whether he can employ handicapped workers and the effect on his liability and his insurance. Any reputable insurance company would have to advise an employer that there was no law preventing him from hiring handicapped workers and that the only objection to be raised would be to the possibility of such extended disability.

It has always been my advice that it was the duty of industry to absorb as many of these handicapped as possible so that there would not be created a situation where such handicapped persons would become public charges. Likewise that the employer would pay additional by way of taxation for the support of such public charges and their failure to so employ, when publicized, would create a weakening of the morale of their present employes who might have visions of the day when they themselves might be physically handicapped. A practice of refusing to employ such persons is one of the factors that can cause a lack of public confidence in the system of free enterprise. It would be well to give a note of warning to insurance representatives that recommendations to employers to refuse employment to such people might form a basis for legal action against the person so advising.

The example of the Ford Motor Company outlined in the article by Mr. Edsel Ford in the *Saturday Evening Post* referred to by Mr. Chester and the present example of results of this Rehabilitation Clinic in Connecticut are only part of the picture indicating that there are many employers in the country and in the state of Michigan who regardless of their increased liability, or their fear of such, have not hesitated to employ the physically handicaped and properly classify them for the work which they can do and there is no indication from any source that I know of that such a practice has been the cause of any great loss to the employer.

The answer to this problem of the increased liability, as the principal impediment to the employment of such handicapped persons, is waiver.

The question of whether a state law should have a provision permitting waiver is one which has been the subject of considerable discussion by leaders of industry, labor and administrators of workmen's compensation laws. I think it might be said generally that labor has objected to any provisions in state compensation laws permitting waiver for the reason that they are fearful that this will be abused by employers. It is true that in some states unscrupulous employers have taken advantage of waiver provisions but such laws are in effect in so few states that it is difficult to use this as a basis. Connecticut, Massachusetts and Wisconsin are I believe the only states where waivers were used to any extent. Limited waivers are in effect in some other states and, as in Michigan, there have been provisions of the law for waiver of certain specific occupational diseases or for hernias. Such provisions were only made operative for short periods of time immediately following the effective dates of such occupational disease laws or of certain amendments to the present compensation act.

Administrators of various workmen's compensation laws seem to be a bit fearful of the effect of a general waiver provision. It would seem that a waiver system, which went no further than to assert that compensation should be waived only for such injuries as may be caused or contributed to by the pre-existing disease or disability, would be a distinct advantage to both labor and industry. In many of the states having no waiver provision the compensation law has been elective and the employe has been permitted to file an election not to be subject to the law. This provision has probably been more abused than would any restricted waiver provision. In Massachusetts "an employe who is, for any reason, peculiarly susceptible to injury or who is peculiarly likely to become permanently or totally incapacitated by an injury may at the discretion of the Department and with its approval within one month from the beginning of his employment, waive his rights

to compensation." The administrative procedure under the statute in Massachusetts has sufficiently circumscribed the manner and extent of its application so as to appear, at least, to provide adequate protection for any employe against any unscrupulous employer.

The State of Connecticut has had a waiver provision in its statutes for many years and is undoubtedly the state which is the outstanding proponent of the use of waivers. A former Commissioner of Compensation from Connecticut in commenting on this provision had this to say:

"It is a provision which, if improperly administered might lend itself to abuse but if administered as it uniformly has been, it is manifestly for the benefit of everybody concerned. If a person has a particular defect which would impose an undue hazard on his employer he would not be likely to be hired except for this waiver provision of the law. But for this waiver thousands of people now earning a living and supporting their families themselves would be without any opportunity to work."

He likewise said that although the validity of the waiver is probably unquestioned, the matter has never been passed upon by their Supreme Court of Errors. I understand they approve approximately 5,000 new waivers annually and have no trouble or friction between employer and employe. He has commented on the fact that most people object to a physical examination, consequently go on for years without knowing about conditions which they may have which if promptly treated may prolong their lives. The waiver procedure involves a physical examination, with the result that the applicant is advised of conditions and effects of which he would have had no knowledge.

The Connecticut provision for waiver is as follows:

Whenever any person having a contract of employment, or desiring to enter into any contract of employment, shall have any physical defect which imposes upon his employer, or prospective employer, an undue or unusual hazard, it shall be permissible for such person to waive in writing for himself or his dependents, or both, any rights to compensation under the provisions of this act for any personal injury arising out of and in the course of his employment which may be found by the commissioner having jurisdiction to be directly due to such physical defect. No such waiver shall become effective unless the physical defect in question shall be plainly described therein, nor until the commissioner having jurisdiction shall find that the person signing such waiver fully understands the meaning thereof, nor until such commissioner shall in writing approve thereof and furnish each of the parties thereto with a copy thereof. No waiver shall be a bar to a claim by the person signing the same, or his dependents, for compensation for any injury arising out of, and in the course of, his employment, which injury shall not be found to be directly due to the particular condition described therein.

These provisions remained until 1927. In that year, the Manufacturers' Association of Connecticut presented the draft of an amendment which, after some compromise with the Connecticut Federation of Labor, was edopted and is in effect at the present time. The present statute differs from the one quoted above in five particulars:

(a) The phrase "undue or unusual hazard" was changed to "a further or unusual hazard."

(b) Death of the worker was specifically in the waiver by adding the words "or death resulting therefrom."

(c) The phrase "directly due to such physical defect" was changed to "attributable in a material degree to such physical defect."

(d) A new sentence was added making clear that employes injured, within the terms of the waiver, had the choice of coming under the compensation act or coming under common law. This sentence reads: "The rights and liabilities of the parties to such waiver as to injuries arising out of and in the course of the employment and within the terms of such waiver shall be such as are provided by law in the case of an employer having regularly less than five employes who shall not have accepted the provisions of said chapter 284."

(e) Minors were covered by insertion of the phrase "if such person shall be a minor that one of the parents or a guardian of said minor shall have approved the same in writing."

This amendment stimulated the demand for waivers.

Indiana has just passed an amendment to its Compensation Law which provides as follows:

A physically handicapped employe may make a partial rejection of this Act after submitting to a medical examination by a physician who shall certify under oath as to the nature and extent of such physical handicap. The employe may make such partial rejection as to such physical handicap on forms furnished by the Industrial Board, and if such partial rejection by the employe is approved by the board, the employer shall

be relieved of any liability under the Workmen's Compensation Act relative to such physical handicap or any aggravation or increased impairment to the employe by reason of any accident that may aggravate or increase such impairment in connection with such physical handicap.

Our Michigan law has always provided that no agreement by an employe to waive his rights to compensation under this act shall be valid. However, in 1937 when the occupational diseases were added to the act, it was provided that not withstanding the nonwaiver provision any employe who had a hernia or who prior to the taking effect of the amendment had been exposed to the hazards of silicosis in certain occupations, might request permission to waive all compensation benefits on account of disability or death resulting from such occupational disease. However by its own limitation this permission to request waiver was in effect for only 120 days after the effective date of the amendment. Quite a number of waivers for hernia were presented and granted but few for the dust diseases.

In the amendments made to the Michigan Act by the 1943 legislature which amendments will take effect on July 29 of this year, the legislature has taken out of the act the schedule of occupational diseases and has made the act all inclusive and again a waiver provision has been inserted permitting an employe, who prior to the taking effect of the amendment shall have been exposed to the hazards of silicosis and other dust diseases, to file a written request to waiver all compesation benefits on account of disability or death resulting from such occupational disease. Also, again by its own limitations this permission to request waiver is limited to the period within 120 days after the effective date of these amendments.

Such waiver provisions therefore as we have in Michigan are very limited indeed when we consider the total field of handicapped workers. I believe that a proper waiver provision could, and should be drafted for Michigan which would encourage the employment of handicapped workers.

At this last session of our state legislature there was introduced into our law another feature new to Michigan legislation which is of distinct advantage to the handicapped worker, particularly those who have suffered severe losses. This is a provision for a second injury fund. As is usual in such statutes throughout the country, the fund is made up of payments by employers in death cases where there are no dependents. The amount is $1,000 in each case and the contribution into the fund coming from the nondependency death cases has no relationship whatsoever to those who draw benefits from the fund. Up to this time under our Michigan Act, if an employe received an injury constituting total and permanent disability, such as the loss of both hands or both arms or both feet, both legs or both eyes or any two thereof in one accident, he would be compensated for a period of 500 weeks. However if he lost these two members in separate accidents, he would only be compensated for each accident standing alone and in such instances never received the total of 500 weeks. Under this new second injury provision the difference between what he has received for the two injuries individually and the amount provided for total permanent disability will be paid to him from this fund, which is in the hands of the state treasurer and will be paid upon order of the compensation commission. Incidentally the number of weeks for such permanent total disability has now been increased from 500 weeks to 750 weeks.

I am unable in this discussion to include the subject of physical examination but it has a close tie-up with the question of waivers and the question of employment of handicapped workers. A better understanding of the advantages of preemployment and periodical examination on the part of labor is in my opinion absolutely essential for the proper operation of the entire compensation law including the subject of waivers and handicapped employes. The principal objection by labor has, I believe, been based upon the fact that some employers have used it as a basis of culling out and discharging employes rather than classifying them for their proper place in industry. Perhaps again legislation will be necessary so that labor's rights in this regard will not be infringed upon.

As Mr. Chester has suggested in their experience in Connecticut, in this time of war when every ounce of manpower is needed in industry for the production of the armaments of war, there was the urge on the part of employers, the handicapped worker and the medical profession as well to spend the time necessary to get a proper program into operation. However, when the war is over, we will have many more handicapped per-

(Continued on Page 755)

An Appreciation



President's Page

Another year in the history of the Michigan State Medical Society is ending. It has been a momentous year, a year filled with startling changes. Never in the history of our country has American life been so radically altered; every person has in some way felt the impact of war.

To serve as your President during this time has been a rare privilege. I deeply appreciate the advice, cooperation and help that have been so freely given me by our able secretary and our most competent executive secretary, by the members of the Council and the officers of the Society, by the committee chairman and their loyal committee members, by all members of the Society. Many physicians though extremely busy with military duties have taken time to offer encouragement. All this could be expected during normal times but in a year when physicians are burdened to the breaking point with multitudinous duties such personal interest in the welfare of medicine in our state has been a most stimulating and satisfying experience.

I should wish for my able successor, Dr. Claude Keyport, a year of peace when all our physicians might again assume their normal peacetime activities in an atmosphere of American traditions. But this cannot be. However, if we continue our present course of patriotic, coöperative leadership in achieving medical progress, if we strive for educational improvement that will enable us to serve our patients better, if we discard all foreign ideologies and avoid attitudes of defeatism, if we set as our goal better medical service to all our people, then we need have no misgivings about the future of American medicine.

H. H. Cummings

President, Michigan State Medical Society.

EDITORIAL

1943 POSTGRADUATE CONFERENCE ON WAR MEDICINE

■ This is a last invitation for attendance at the seventy-eighth annual session of the Michigan State Medical Society. The program has been published and is certainly outstanding. Greater talent never has been assembled for postgraduate instruction than is offered at this meeting. Special stress has been placed on military medicine and related topics. Many of our military members will be in attendance, and our civilian membership will profit not only by the postgraduate instruction, but by the contacts and inspiration to be gained from such a gathering.

A few days away from our busy practices will be days well spent in increasing our collective knowledge, and in recreation, relaxation, and fellowship which will have untold value in mental and physical improvement. We owe this effort to ourselves as well as to the ultimate improvement of the service we will render to our patients.

It is not too late to make plans and to attend this meeting. Get hotel reservations NOW.

MATERNAL SERVICE FOR WIVES OF SERVICEMEN

■ The Council, at its annual summer meeting, held a conference with representatives of the Bureau of Maternal and Child Health of the State Department of Health, and discussed the federal program of rendering aid to the wives of men in service. The Council recognizes that the period of pregnancy and childbirth is a major problem in the lives of soldiers and their wives when they are receiving limited payment for their services and are not in a position to improve or change their status. This is an added expense that the government should assume. At least, reasonable assistance should be given these young people.

The Council believes it expresses the opinion of a majority of our members in taking the stand it has: (a) that federal grants be made direct to wives and dependent infants of enlisted men to provide the necessities of life, including medical care; (b) that such federal grants so paid to enlisted men's wives be used by the recipients as necessity requires; (c) that the Michigan State Medical Society should coöperate in a plan embodying these principles, provided (1) that the program terminate six months after the end of the present war, (2) that the physician-patient relationship on a fee basis be maintained, and (3) that the blanks be simplified. The Council disapproved the features of the present plan which places a bureaucrat between the patient and her doctor, which makes payment direct to the doctor denying the patient the American right to make her own plans and manage her own affairs; which requires reports including information not necessary or properly reportable; which places a penalty on the doctor if he makes other arrangements; which denies the patient any benefits whatever unless the doctor subscribes to a document which he cannot approve.

The Council and the Michigan State Medical Society will approve a plan to make this help available to the wives and infants of enlisted soldiers, sailors, marines and coast guardsmen, in such a way that they can be independent individuals and make their arrangements with their doctors in an American manner, as physician and patient, and with no bureaucrat in between.

The plan has been turned down by the State Department of Health of Ohio, after the Council of the Ohio State Medical Society had disapproved it in its proposed form.*

THE WAGNER-MURRAY-DINGELL BILL

■ On June 3, 1943, Senator Robert F. Wagner of New York, for himself and Senator James Murray of Montana, introduced in the Senate Bill 1161. *The same bill was introduced in the House of Representatives by Michigan's John D. Dingell of Detroit.* If the recommendations are enacted into law, they will destroy the private practice of medicine in the United States. The definition of purposes is couched in the language of true humanitarianism. The actual motivation need not be discussed. The proposals are of such magnitude and of such sinister menace that prac-

*The Columbus Dispatch, July 23, 1943.

ically, they are incomprehensible to an American. The processes proposed and the mechanism indicated are designed to act as the catalyst in transforming a rapidly expanding Federal bureaucracy into an all powerful, totalitarian state control.

Senate Bill 1161 provides for "FREE" general medical, special medical, laboratory and hospital benefits for more than one hundred and ten million people in the United States. It places in the hands of one man, the Surgeon General of the United States Public Health Service the power and authority:

1. To hire doctors and establish rates of payment.
2. To establish fee schedules for services.
3. To establish qualifications for specialists.
4. To determine the number of individuals for whom any physician may provide services.
5. To determine what hospitals or clinics may provide service for patients.

The total annual revenue of the Bill will be Twelve Billion Dollars. Section 913 of the Bill establishes a "Medical Care and Hospital Account" into which shall be paid a minimum of three billion dollars each year.

Section 903 provides that "The Surgeon General of the Public Health Service is hereby authorized and directed to take all necessary steps to arrange for the availability of the benefits provided under this title."

Twenty per cent of the fund will go to administration expense and 20 per cent to paying doctors of medicine at an estimated average of $5,000 per year. The office holders, clerks, and nonmedical administrators, politicians, and persons, to whom the highly trained medical profession will be made subservient, will be getting as much for "bossing" as the profession will for rendering its services and caring for the sick public.

"For the purpose of encouraging and aiding the advancement and dissemination of knowledge and skill in providing benefits under this act, and in preventing illnes, disability, and premature death, the Surgeon General is hereby authorized and directed to administer grants-in-aid to nonprofit institutions and agencies engaging in research or in undergraduate or graduate professional education. * * * For the purposes of this subsection there shall be available each calendar year, beginning with the calendar year 1944, an amount equal to 1 per centum of the total amount expended for benefits from the Trust Fund, exclusive of unemployment benefits, or 2 per centum of the amount expended for benefits under Title IX, after benefits under that title have been payable for not less than twelve months, whichever is lesser, in the last preceding fiscal year."

This would make about $48,000,000.00, with which the Surgeon General could:

(a) Assume the total costs of operating the 66 accredited medical colleges in the United States..... $21,491,248.00
(b) Subsidize 22,000 medical students at $700 per year for a period of four years 15,400,000.00
(c) Spend for research, et cetera..... 11,108,752.00

Under this scheme would there be any private practice of medicine? We cannot believe that the science and art of medicine would go on making new discoveries and advances and would grow in the future as it has in the past few decades under such controls and such bureaucratic dominance and direction.

This bill is a threat to the very existence of the medical profession as a scientific and independent body. It is not something we can pass over, and let our brother be our keeper. If we do, we are lost. Every member should write personally to his United States senators and representatives, telling them where we stand, and why. We should also make a point of seeing them, and talking to them personally. They are our spokesmen, and should do our will. We have the power. Will we use it?

DISCUSSION CONFERENCES

The Discussion Conferences were an innovation at the Michigan State Medical Society Annual Session of 1941. Their value to the practitioner was so great that they were repeated, with similar high success, in 1942. This year the Discussion Conferences have been enlarged. Twenty of the world's best qualified specialists, who will present their views and findings to you at the General Assemblies on September 22, 23, 24, will be available for questions at the close of the afternoon sessions.

These "quiz periods" are your opportunity to present the case which has been puzzling you, to verify your clinical findings, and to discuss intimate medical matters of value to you in your daily practice.

If you are interested in your medical progress, plan to attend the 78th Annual Session of the Michigan State Medical Society in Detroit. Three big days of scientific medicine have been arranged for you.



Detroit Skyline

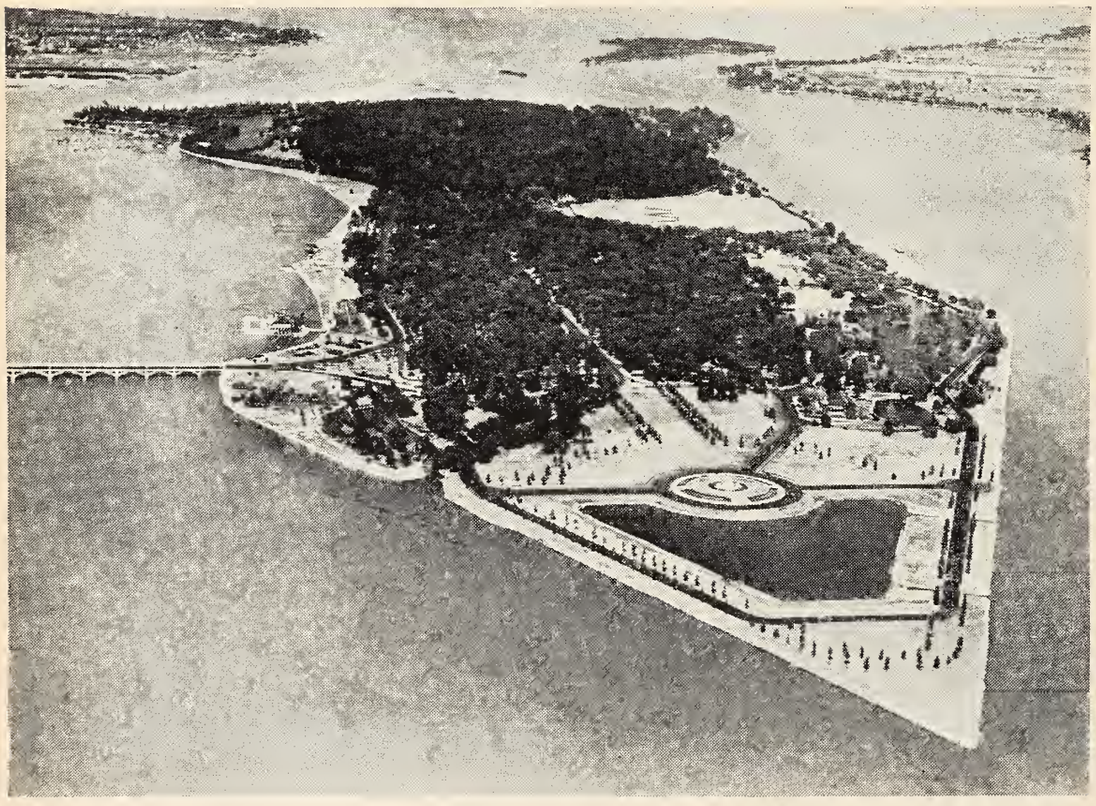
DETROIT, THE HUB OF WAR MEDICINE

AMERICA is the Arsenal of Democracy, and Detroit is its very heart.

During the 1943 Postgraduate Conference on War Medicine—the 78th Annual Session of the Michigan State Medical Society—Detroit will become the Hub of War Medicine for doctors in medicine in Michigan, Northern Ohio and Western Ontario.

Detroit was the scene of a Postgraduate Conference on Industrial Medicine last April. Some of the excellent papers presented at this successful meeting are published in this issue of THE JOURNAL, to focus attention on the great industrial and medical achievements being wrought today in Detroit and in Michigan.

It is fitting that the 1943 War Conference with its outstanding program should be held in Detroit. This kinetic city has become one of the important education centers of the country. Wayne University has grown great with its affiliated medical, law, and teachers' colleges. Expanding Wayne University Medical School emphasizes not only the practical or clinical features of medicine but extensive research in the various sciences basic to medicine and surgery. The rich and varied clinical material which such a large city as Detroit provides is being used for teaching purposes, with the Wayne University faculty and Wayne County Medical Society members carrying out this important program.



Airplane View of Belle Isle, Detroit



Grand Circus Park, Detroit

Statler Hotel (MSMS Headquarters) in center, behind fountain

Detroit as a war manufacturing center is well known to the world. Not everyone is cognizant of the fact that 133 companies in Detroit manufacture drugs and chemicals, so important to our fighting forces at the front.

The Wayne County Medical Society is the fourth largest component county society in the United States. Its 2,000 members enjoy an unusually large number of benefits, including the David Whitney House located at Woodward and Canfield, now the property of the organization. In this dignified edifice, given to the Society by the David Whitney family, not only the scientific side of medicine but also the social aspects are enhanced. The Wayne County Medical Society will welcome out-state doctors who visit their headquarters on the occasion of the 1943 War Conference.

Come to Detroit, gain a knowledge of the latest in scientific medicine, see old friends and make new ones, and enjoy the many attractions of Michigan's metropolis.



General Motors Building

THE 78TH ANNUAL SESSION

1943 POSTGRADUATE CONFERENCE ON WAR MEDICINE

DETROIT

ANNUAL SESSION INFORMATION

DIRECTORY

Headquarters .....Statler Hotel, Detroit
Registration .....Ballroom Floor, Statler Hotel
Telephone: Cherry 6000
General Assemblies .....Ballroom, Statler Hotel
MSMS Hospitality Booth Opposite Registration Desk, Statler Hotel
Exhibits .....Ballroom Floor, Statler Hotel
Publicity, Press Room.....Parlor C, Statler Hotel
Women's Auxiliary, Headquarters and Registration .....Statler Hotel

* * *

Register—Ballroom floor, Statler Hotel—as soon as you arrive.

Hours of registration daily: 8:30 a.m. to 5:30 p.m., Tuesday, Wednesday, and Thursday, September 21, 22, 23, and from 8:30 a.m. to 2:30 p.m. on Friday, September 24.

Admission by badge only to all scientific assemblies and section meetings. Monitors at entrance at all times.

BRING YOUR MSMS OR AMA MEMBERSHIP CARD TO EXPEDITE REGISTRATION.

No registration fee to members of the Michigan State Medical Society.

* * *

Michigan Physicians, not members, if listed in the American Medical Directory, may register as guests upon payment of $5.00. This amount will be credited to them as dues in the Michigan State Medical Socity FOR THE BALANCE OF 1943 ONLY, provided they subsequently are accepted as members by their County Medical Society.

You Are Cordially Invited
to Visit the
Michigan State Medical Society

HOSPITALITY BOOTH

Opposite Registration Desk—Statler Hotel

STOP AND CHAT WITH YOUR STATE SOCIETY OFFICERS

Postgraduate Credits are given to every member who attends the 1943 Postgraduate Conference on War Medicine, the Annual Session of the Michigan State Medical Society, Wednesday, Thursday, Friday, September 22, 23, 24, at Detroit.

* * *

W. D. Barrett, M.D., David Whitney Bldg., Detroit, is General Chairman of the Detroit Committee on arrangements for the 1943 Postgraduate Conference on War Medicine—the 78th Annual Session of the Michigan State Medical Society.

* * *

The Committee Organization Luncheon, a meeting of Michigan State Medical Society Chairmen appointed by President-elect Claud R. Keyport, M.D., to serve during the year 1943-44, will be held Wednesday, September 22, in Parlor D, Statler Hotel, Detroit, 12:00 noon to 1:30 p.m.

* * *

Register at Every Booth—there is something new for you in the interesting exhibit of 60 spaces. Stop and show your appreciation of the exhibitors' support in making the Postgraduate Conference possible.

SIXTEEN DISCUSSION CONFERENCES

These quiz periods will be held Wednesday, Thursday, and Friday, September 22, 23, 24, at 4:00 to 5:00 p.m. An opportunity to ask questions concerning the presentations of the guest essayists, or to discuss one of your interesting cases with them, will be provided.

Wednesday: Discussion Conference will be held on General Practice, Surgery, Dermatology, Radiology-Pathology, Obstetrics, Pediatrics.

Thursday: Discussion Conferences on Otolaryngology, Surgery, Medicine, Gynecology, Pediatrics.

Friday: Discussion Conferences will be presented on Medicine, Ophthalmology, Dermatology, Obstetrics, and General Practice.

Please submit your questions, on forms printed in the Program, to the Secretary of the General Assembly immediately after the termination of the lecture, in order that the guest essayist may have time to consider same before the quiz period at 4:00 p.m.



Demonstration of the Kenny Method

Sister Elizabeth Kenny of Australia will speak on Poliomyelitis at the Michigan State Medical Society's Annual Session, Friday, September 24, 3:00 p.m. This meeting will be limited in attendance to Doctors of Medicine.

Public Meeting: The Michigan State Medical Society announces a public address by Sister Kenny on Friday, September 24 at 8:00 p.m. in the Ballroom of the Statler Hotel, Detroit. James D. Bruce, M.D., Ann Arbor, will be Chairman, and Frank Van Schoick, M.D., Jackson, will be Secretary of this meeting.

Members of the Michigan State Medical Society are urged to invite their patients and the public generally to attend this meeting to hear Sister Kenny outline her pioneer work in the treatment of infantile paralysis. No admission charge.

Ten Section Meetings will be held during the Michigan State Medical Society Conference on War Medicine. All the Sections will meet at luncheons in the Statler Hotel, Detroit, as follows:

Wednesday, September 22, 12:00 noon to 1:30 p.m. (luncheons)

1. Dermatology and Syphilology—Judge Woodward ooRm (See page 738)
2. Radiology and Pathology—Michigan Room (See page 738)
3. General Practice—English Room (See page 738)

Thursday, September 23, 12:00 noon to 1:30 p.m. (luncheons)

4. Surgery—Ballroom (See page 741)
5. Gynecology and Obstetrics—Michigan Room (See page 741)
6. Otolaryngology—Judge Woodward Room (See page 741)
7. Anesthesia—Parlor F (See page 741)

Friday, September 24, 12:00 noon to 1:30 p.m. (luncheons)

8. Medicine—Ballroom (See page 744)
9. Pediatrics—English Room (See page 744)
10. Ophthalmology—Parlor F (See page 744)

* * *

Guest essayists are very respectfully requested not to change time of their lecture with another speaker without the approval of the General Assembly. This request is made in order to avoid confusion and disappointment on the part of some members of the audience.

PUBLIC MEETINGS

Two evening meetings will be open to the public:

1. **President's Night,** Wednesday, September 22, will be highlighted by:
   8:00 p.m. President's Address (H. H. Cummings, M.D.)
   Induction of President-elect (Claud R. Keyport, M.D.)
   9:00 p.m. Biddle Oration (Edward A. Schumann, M.D.)
2. **Sister Elizabeth Kenny Lecture,** Friday, September 24, 8:30 p.m.

Invite your patients and other friends to attend these interesting meetings. No admission fee.

PAPERS WILL BEGIN AND END ON TIME!

Believing there is nothing which makes a scientific meeting more attractive than by-the-clock promptness and regularity, all meetings will open exactly on time, all speakers will be required to begin their papers exactly on time, and to close exactly on time, in accordance with the schedule in the program. All who attend the meeting, therefore, are requested to assist in attaining this end by noting the schedule carefully and being in attendance accordingly. Any member who arrives five minutes late to hear any particular paper will miss exactly five minutes of that paper!

TWO-DAY SESSION OF HOUSE OF DELEGATES

You Are Invited

All MSMS members are invited and urged to attend the session of the House of Delegates.

The 1943 House of Delegates of the Michigan State Medical Society will hold a two-day session, beginning Monday, September 20, 8:00 p.m. The business of the House will be transacted in the Ballroom of the Statler Hotel, Detroit.

The House will meet Tuesday, September 21 at 10:00 A.M. and at 8:00 P.M. The intervals between meetings of the House of Delegates have been spaced to permit the reference committees ample time to transact all business referred to them.

Such additional meetings as may be necessary will be held Wednesday, September 22, beginning at 10:00 A.M.

Press Relations Committee—C. E. Dutchess, M.D., Detroit, Chairman; M. H. Hoffman, M.D., Detroit; S. W. Insley, M.D., Detroit.

* * *

Technical Exhibits—60 displays—will open daily at 8:30 a.m. and close at 6 p.m. with the exception of Friday when the exhibits will close at 2 p.m. Frequent intermissions to view the exhibits have been arranged before and after the General Assemblies and Section Meetings.

* * *

Michigan Medical Service. The Fourth Annual Meeting of the Michigan Medical Service Membership will be held Tuesday, September 21, at 2 p.m. in the Ballroom of the Statler Hotel, Detroit.

Members of Michigan Medical Service are all the members of the MSMS House of Delegates plus the Directors of Michigan Medical Service. The Officers' Reports and Election of Directors will be on the Agenda of the Annual Meeting.

* * *

"EVERY MEMBER OF THE MICHIGAN STATE MEDICAL SOCIETY IS INVITED AND URGED TO ATTEND THE MEETINGS OF THE HOUSE OF DELEGATES."—P. L. Ledwidge, M.D., Speaker.

PROPOSED AMENDMENTS TO CONSTITUTION OF MICHIGAN STATE MEDICAL SOCIETY

The following amendments were presented at th 1942 annual session and according to the Constitutio were referred to the 1943 session of the House c Delegates for final consideration:

Constitution

1. Amend *Article III, Section 1,* as follows: "Thi Society shall consist of active members, honorary mem bers, associate members, retired members, and mem bers emeritus."

Comment.—The 1942 House of Delegates eliminatec "junior membership" by deleting Article III, section 3 of the Constitution. This proposed amendment woulc eliminate the words "junior members" from the list of memberships in the State Society.

•

2. Amend *Article VII, Section 1,* as follows: "The Society shall hold an annual session at such time and place and of such duration as the House of Delegates and The Council may determine. This power may be delegated to The Council. Any County Society desiring the annual session shall file an application with the Council sixty days prior to an annual session."

Comment.—This proposed amendment would change the word "meeting" to "session," in line with previous actions of the House of Delegates.

•

3. Amend *Article VII, Section 2,* as follows: "Special meetings of the Society shall be called for general session on the petition of The Council, or by a petition signed by two hundred and fifty members, or upon petition of two-thirds of the delegates seated at the previous regular session. The call" . . . etc.

4. Amend *Article VII, Section 3,* as follows: "Special meetings of the House of Delegates shall be called by the Speaker on the petition signed by two-thirds of the Delegates seated at the last regular session of the House."

Comment.—These proposed amendments (Nos. 3 and 4) would change the word "registered" to "seated," referring to delegates.



Art Center

General Motors and Fisher Buildings in Background

Woman's Auxiliary



Mrs. G. L. Willoughby, President

COMMITTEE CHAIRMEN

Banquet—Mrs. Leo Bartemeier
Pre-Convention Luncheon—Mrs. O. W. Picard
Luncheon—Mrs. John M. Carter
Tea—Mrs. William L. Sherman
Flower Committee—Mrs. George M. Laning
Finance—Mrs. Robert L. Novy
Hospitality—Mrs. Milton A. Darling
Publicity—Mrs. E. C. Baumgarten
Registration and Credentials—Mrs. Ledru O. Geib
Exhibits—Mrs. Arthur Kretchmar
Printing—Mrs. L. Paul Sonda
Program—Mrs. Galen Ohmart
Courtesy—Mrs. Frederick Buesser
Pages—Mrs. N. O. LaMarche



Mrs. A. O. Brown, Chairman

The State Convention Committee of Detroit welcomes the Seventeenth Annual Convention of the Woman's Auxiliary to the Michigan State Medical Society, and we shall endeavor to make your stay in Detroit a memorable one.

Isabelle L. Brown

Program

Monday, September 20, 1943

6:30 P.M. **Dinner at the home of Mrs. Elmer L. Whitney for Past Presidents and Secretaries Club of State Auxiliary**
Mrs. Guy L. Kiefer—President
Mrs. Elmer L. Whitney—Chairman
(Acceptance essential)

Tuesday, September 21, 1943

10:00 A.M. **Registration—Hotel Statler**

10:30 A.M. **Finance Committee—Mrs. H. L. French, Chairman**

12:30 P.M. **Luncheon—Pre-Convention Board Meeting**
Salle Detroit, 2nd Floor, Hotel Statler.
Complimentary 1942-43 Board Members and County Presidents.
All members welcome to attend.

4:00 P.M. **Tea—Honoring National President—Mrs. Eben J. Carey**
Wayne County Medical Building
Hostesses—Wayne County Auxiliary

7:00 P.M. **Banquet — (Informal) — Michigan Room, Hotel Statler**
Presiding—Mrs. Gordon L. Willoughby
National Anthem—Led by Mrs. Gaylord Bates, accompanied by Mrs. Roland Athay
Welcome—Mrs. A. O. Brown, Chairman
Presentation of Past Presidents
Speakers and Honored Guests:
Dr. James E. Paullin, President of American Medical Association
Dr. H. H. Cummings—President of the Michigan State Medical Society
Dr. Frank Reeder, Chairman of Advisory Council
Mrs. Eben J. Carey, President Woman's Auxiliary to AMA
Play—given by Wayne County Auxiliary Members

Wednesday, September 22, 1943

8:00 A.M. **Registration—Hotel Statler**

9:00 A.M. **Formal Opening of Convention—Michigan Room, Hotel Statler**
Presiding—Mrs. Gordon L. Willoughby, President of the Woman's Auxiliary to the Michigan State Medical Society
Pledge of Allegiance—Mrs. G. M. Brown —President of Bay County Auxiliary
Introductions:
Address of Welcome—Mrs. T. Grover Amos—President of Wayne County Auxiliary
Response—Mrs. H. L. French
Greetings—Dr. Wyman D. Barrett—President Wayne County Medical Society
In Memoriam—Mrs. Alvin Thompson—President of Genesee County Auxiliary
Report of Mrs. A. O. Brown—Convention Chairman
Minutes of the 16th Annual Meeting—Mrs. Wm. B. Hubbard
Roll Call
Reports of Chairmen of Convention Committees, Credential and Registration
Convention Rules of Order—Mrs. C. W. Ely, President of Saginaw Auxiliary
Resolutions—Mrs. Wm. G. Mackersie, Wayne County Auxiliary
Report of Treasurer—Mrs. R. H. Alter
Auditor's Report—Mrs. R. H. Alter
President's Message—Mrs. G. L. Willoughby
Report of County Presidents
Report of Chairmen of Standing Committees
New Business
Unfinished Business
Report of Committee on Nominations—Mrs. Earl J. McIntyre
Reports of Chairmen of Special Committees
District Councilors
Presentation of Pin
Address—Mrs. John J. Walch
Adjournment

12:30 P.M. **Annual Luncheon—Palm Room, Book Cadillac Hotel**
Presiding—Mrs. A. O. Brown, Convention Chairman
National Anthem—Led by Mrs. Gaylord Bates, accompanied by Mrs. Roland Athay
Introductions
Speaker—Mrs. Eben J. Carey—President of the Woman's Auxiliary to the AMA.
Panel Discussion—Education for Victory and Peace
Mrs. Galen Ohmart, Chairman

3:30 P.M. **Post-Convention Board Meeting** (immediately following luncheon)
Palm Room, Book Cadillac Hotel
Presiding—Mrs. John J. Walch
1943-44 Postwar Auxiliary

8:00 P.M. **Presidents' Night—Michigan State Medical Society**
For members of MSMS, their wives and guests

WEDNESDAY MORNING
September 22, 1943

First General Assembly

Ballroom—Statler Hotel, Detroit

A. S. BRUNK, M.D., Presiding
L. FERNALD FOSTER, M.D. and TRAIAN LEUCUTIA, M.D., Secretaries

A. M.

9:30 "The Responsibility of the Medical Profession in Postwar Planning"

JAMES E. PAULLIN, M.D., Atlanta, Georgia



JAMES E. PAULLIN

Professor of Clinical Medicine, Emory University Medical School; President of the American Medical Association; President of the American College of Physicians; member of Committee on Medicine, National Research Council, Washington, D. C.; member of Directing Board of Procurement and Assignment Service, Washington, D. C.

The accomplishments of American Medicine in the present emergency relating to the health of the Army and Navy. The lowest mortality rate from battle casualities. Such achievements in war necessitate looking to the future to determine the type of medical practice which will be necessary for all groups. Problems of furnishing training for interns and residents. Greater attention to the general practice of medicine. Establishment of adequate facilities for civilian medical care. Resistance to bureaucratic control of medical practice.

10:00 "Biliary Tract Disease"

FRANK H. LAHEY, M.D., Boston, Mass.



FRANK H. LAHEY

Director of Surgery, Lahey Clinic, Boston; Chairman of Medical Consulting Board to United States Navy; Chairman of Procurement and Assignment Service for Medical Personnel for the Armed Forces.

The relationship of long-standing gallstones to mortality and morbidity in cholelithiasis will be discussed. The conclusion that unless common duct stones are removed, end-results following cholecystectomy for gallstones will be bad; the incidents of common duct stones in four thousand patients operated upon for gallstones is about one in every five operated upon; that to be on the safe side, two common ducts ought to be opened for every stone found and removed. The causes of recurrent common duct stones and how this complication may be overcome will be presented.

The question of carcinoma of the head of the pancreas and carcinoma of the common bile duct producing painless jaundice will be discussed, as well as diagnosis and differentiation from gallstones and its treatment.

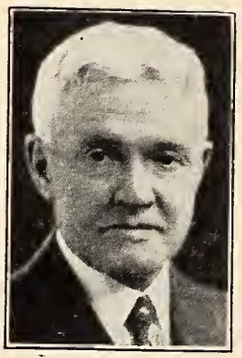
The relationship of cirrhosis to long-standing biliary infection and back pressure will also be discussed.

An experience with ninety-three strictures of the common and hepatic ducts together with the methods of managing them will be discussed and the methods illustrated.

The preparation and the anesthesia for patients operated upon for biliary tract disease, together with the postoperative management, will be taken up.

10:30 "Avitaminosis in Dermatology and the Value and Limitations of the Sulfa Group in Skin Diseases."

OLIVER S. ORMSBY, M.D., Chicago, Illinois



OLIVER S. ORMSBY

Clinical Professor and Chairman, Department of Dermatology, Rush Medical College.

Avitaminosis is due to inadequate utilization of vital substances contained in food. It is usually due to an unbalanced diet in which food containing the necessary vitamins is not consumed. Avitaminosis may occur, however, when the food supply is adequate due to several factors described in the paper. The chief vitamin deficiency diseases include pellagra, beriberi, scurvy (scorbutus) and rickets. The cutaneous avitaminoses characterized by follicular hyperkeratosis include Darier's disease (keratosis follicularis), pityriasis rubra pilaris and possibly keratosis pilaris, lichen pilaris seu spinulosis (Crocker) and xerosis. A new syndrome due to vitamin A deficiency is characterized by follicular hyperkeratosis, keratomalacia and nyctalopia (night blindness). Vitamin G (B_2) riboflavin deficiency is represented by a syndrome characterized by perleche and dermatitis seborrheic-like lesions together with ocular and oral mucous membrane involvement. The iritis of rosacea is now considered a riboflavin deficiency. Vitamin C (ascorbic acid) deficiency is represented by scurvy.

Pellagra is now considered to be an example of multiple avitaminosis, the chief deficiencies being nicotinic acid, thiamin chloride, riboflavin and vitamin B_6.

The sulfa group of compounds have been used in a large number of dermatoses, both internally and locally. They are of distinct value in erysipelas, erysipeloid, chancroid, lymphogranuloma venereum, hydradenitis suppurativa, lymphangitis pyoderma, gangrenosum and chronic streptococcus ulcers. Dermatitis herpetiformis is well controlled with sulfapyradine. Impetigo and other pyodermic infections respond well to sulfathiazole incorporated in an ointment base. This is also very valuable used in solution or ointment base in the treatment of burns.

Sixteen Discussion Conferences (Quiz Periods)

All Meetings in the Statler Hotel, Detroit

Sixteen discussion conferences each with a different chairman—leaders of outstanding ability in their field—will be held Wednesday, Thursday, and Friday afternoons. Here the doctor will have a chance to ask questions of the lecturers he has heard and to hear discussed medical matters of value to him in his daily practice.

Wednesday, September 22—4:00 to 5:00 p.m.

SURGERY	OBSTETRICS	PEDIATRICS	DERMATOLOGY	RADIOLOGY PATHOLOGY	GENERAL PRACTICE
Ballroom Leader: **E. I. Carr, M.D.** Lansing Guest Conferee: **F. H. Lahey, M.D.** Boston, Mass.	(Maternal Health) English Room Leader: **H. H. Cummings, M.D.** Ann Arbor Guest Conferee: **E. A. Schumann, M.D.** Philadelphia, Pa.	Judge Woodward Room Leader: **D. J. Barnes, M.D.** Detroit Guest Conferee: **Irvine McQuarrie, M.D.** Minneapolis, Minn.	Parlor F. Leader: **Ruth Herrick, M. D.** Grand Rapids Guest Conferee: **O. S. Ormsby, M.D.** Chicago, Ill.	Salle Detroit Co-Leaders: **S. W. Donaldson, M.D.** Ann Arbor and **Lt. Col. C. I. Owen, M.C.** Detroit Guest Conferees: **P. R. Cannon, M.D.** Chicago, Ill. and **E. L. Jenkinson, M.D.** Chicago, Ill.	Michigan Room Leader: **Arch Walls, M.D.** Detroit Guest Conferee: **J. E. Paullin, M.D.** Atlanta, Ga.

Thursday, September 23—4:00 to 5:00 p.m.

MEDICINE	SURGERY	OBSTETRICS	PEDIATRICS	OTOLARYNGOLOGY
Michigan Room Leader: **H. H. Riecker, M.D.** Ann Arbor Guest Conferees: **Col. L. G. Rowntree, M.C.** Washington, D. C. and **J. C. Whitehorn, M.D.** Baltimore, M.D.	Ballroom Leader: **Col. G. C. Penberthy, M.C.** Omaha, Nebr. Guest Conferees: **Col. R. H. Kennedy, M.C.** Battle Creek, Mich. and **Kellogg Speed, M.D.** Chicago, Ill.	English Room Leader: **A. E. Catherwood, M.D.** Detroit Guest Conferee: **E. D. Plass, M.D.** Iowa City, Iowa	Judge Woodward Room Leader: **John L. Law, M.D.** Ann Arbor Guest Conferee: **A. Ashley Weech, M.D.** Cincinnati, Ohio	Salle Detroit Leader: **A. C. Furstenberg, M.D.** Ann Arbor Guest Conferee: **H. I. Lillie, M.D.** Rochester, Minn.

Friday, September 24—4:00 to 5:00 p.m.

MEDICINE	GYNECOLOGY	OPTHALMOLOGY	DERMATOLOGY	GENERAL PRACTICE
Ballroom Leader: **Wm. S. Reveno, M.D.** Detroit Guest Conferees: **W. C. Alvarez, M.D.** Rochester, Minn. and **H. A. Reimann, M.D.** Philadelphia, Pa.	English Room Leader: **Geo. Kamperman, M.D.** Detroit Guest Conferee: **R. D. Mussey, M.D.** Rochester, Minn.	Salle Detroit Leader: **R. H. Pino, M.D.** Detroit Guest Conferee: **P. C. Kronfeld, M.D.** Chicago, Ill.	Judge Woodward Room Leader: **H. L. Keim, M.D.** Detroit Guest Conferee: **H. R. Foerster, M.D.** Milwaukee, Wis.	Michigan Room Leader: **John S. DeTar, M.D.** Milan, Mich. Guest Conferee: **W. S. Sadler, M.D.** Chicago, Ill.

All Members Are Invited to Join in These QUIZ PERIODS With the Guest Essayists

11:00 "Deformities of the Pyloric Antrum Due to Perigastric Adhesions and Bands Simulating Intrinsic Gastric Lesions"

E. L. JENKINSON, M.D., Chicago, Illinois



E. L. JENKINSON

Associate Professor of Radiology, Northwestern University; Director of Department of Radiology at St. Luke's and Ravenswood Hospitals.

Lesions of the pyloric antrum have always interested the internist, surgeon, and roentgenologist, and only through close cooperation is it possible to identify early lesions of the antrum. This is a report of the rentgenologic findings in five cases in which perigastric adhesions caused gastric deformities closely resembling intragastric malignancy.

The patients were all carefully checked fluoroscopically on several occasions. Antispasmodics failed to influence the deformity. All of the patients herein reported were subject to surgery.

Evidence is presented showing the fallibility of x-ray diagnosis in lesions of the pyloric antrum and the need for a diagnostic laparotomy in the early differential diagnosis.

11:30 End of First General Assembly
Half-hour Intermission to View Exhibits

In Italy—

Iceland—

Alaska—

Buna—

Burma—

Everywhere—

Medical men in Service would trade a month's allotment for the privilege of attending the MSMS 1943 War Conference.



—— PROGRAM of SECTIONS ——

Wednesday

September 22, 12:00 to 1:30 p.m. (luncheons)

SECTION ON DERMATOLOGY AND SYPHILOLOGY

Judge Woodward Room

Chairman: CLAUD BEHN, M.D., Detroit
Secretary: LT. COMM. FRANK STILES, M.C., USNR

"Dermatological Conditions," Illustrate by Kodachromes (30 min.)

OLIVER S. ORMSBY, M.D., Chicago, Illinois

* * *

SECTION ON RADIOLOGY, PATHOLOGY, AN ANESTHESIA*

Michigan Room

Chairman: TRAIAN LEUCUTIA, M.D., Detroit
Secretary: HAZEL PRENTICE, M.D., Kalamazoo
Secretary: H. J. VANBELOIS, M.D., Grand Rapids

(a) **"Erythroblastosis"** (10 min.)
DONALD C. BEAVER, M.D., Detroit

(b) **"Important Contributions of X-Rays t War Industry"** (10 min.)
KENNETH E. CORRIGAN, Ph.D., Detroit

(c) **"Acute Peptic Esophagitis"** (15 min.)
PAUL R. CANNON, M.D., Chicago

(d) **"Radiation Sickness: Its Cause and Treatment** (15 min.)
E. L. JENKINSON, M.D. and
W. H. BROWN, M.D., Chicago

**The anesthetists will hold a separate meeting Thursday noon, September 23, 1943. See Program on page 633.*

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SECTION ON GENERAL PRACTICE

English Room

Chairman: H. B. ZEMMER, M.D., Lapeer
Secretary: NINA WILKERSON, M.D., Sturgis

"Common Errors in the Treatment of Indigestion" (30 min.)

JAMES E. PAULLIN, M.D., Atlanta, Georgia

* * *

P. M.
1:30 Half-hour Intermission to View Exhibits

PROGRAM of
— GENERAL ASSEMBLIES —
WEDNESDAY AFTERNOON
September 22, 1943

Second General Assembly

Ballroom—Statler Hotel, Detroit

DEAN W. MYERS, M.D., Presiding
L. FERNALD FOSTER, M.D., and RUSSELL DEALVAREZ, M.D., Secretaries

P. M.

2:00 "Protein Metabolism and Resistance to Infection"

PAUL R. CANNON, M.D., Chicago, Illinois



PAUL R. CANNON

Professor of Pathology and Chairman of the Department, The University of Chicago.

The relationship between undernutrition associated particularly with protein deficiency and increased susceptibility to infectious disease will be discussed. Evidence will be presented showing that hypoproteinemia is frequently associated with intercurrent infections. Discussion will be directed at the problem of the relationship of protein intake to the building up of the protein reserves and to the acquisition of immunity, the fabrication of antibodies and their role in preventing or resisting the development of intercurrent infections.

2:30 "Post-partum Sterilization an Indefensible Procedure"

EDWARD A. SCHUMANN, M.D., Philadelphia, Pennsylvania



EDW. A. SCHUMANN

3:00 "Causes and Treatment of Edema in Childhood"

IRVINE MCQUARRIE, M.D., Minneapolis, Minnesota



IRVINE MCQUARRIE

Ph.D. University of California, 1918; M.D., Johns Hopkins, 1921; Professor and Head of Department of Pediatrics, University of Minnesota; Chief Pediatrician University of Minnesota Hospitals.

The various physiological and pathological mechanisms of edema formation are discussed briefly. The role of protein dietary deficiency and inability of the body to fabricate serum proteins are stressed. Recent advances in our knowledge concerning the etiology and treatment of nephrotic, nephritic and cardiac edema in children are likewise reviewed. Because of widespread partial starvation, the incidence of edema among children in war-torn and occupied countries is extremely great. The important relationship of this state to the general health of the child population is given special attention.

3:30 Half-hour Intermission to View Exhibits

4:00 DISCUSSION CONFERENCES WITH GUEST ESSAYISTS

5:00 End of Second General Assembly

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YOUR FRIENDS IN THE EXHIBIT HAVE NEW IDEAS IN SERVICE AND RECENT IMPROVEMENTS IN EQUIPMENT.



WEDNESDAY EVENING
September 22, 1943

Third General Assembly

Ballroom—Statler Hotel, Detroit

H. H. Cummings, M.D., Presiding
L. Fernald Foster, M.D., Secretary

P. M.

8:30 PRESIDENTS NIGHT—PUBLIC MEETING

1. **Call to order by President H. H. Cummings, M.D., Ann Arbor**
2. **Announcements and Reports of the House of Delegates, by Secretary L. Fernald Foster, M.D., Bay City.**
3. **President's annual address—H. H. Cummings, M.D.**
4. **Induction of Claude R. Keyport, M.D., Grayling, into office as President of the Michigan State Medical Society. Response.**
5. **Presentation of Scroll and Past President's Key to Dr. Cummings by the Chairman of The Council, A. S. Brunk, M.D.**
6. **Introduction of the President-Elect and other newly elected officers of the State Society.**

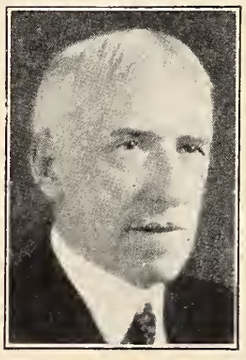
9:00 7. The Andrew P. Biddle Oration "Medical Education and Present-day Philosophies of Government"

Edward A. Schumann, M.D., Philadelphia, Pennsylvania



Edw. A. Schumann

8. Presentation of Biddle Oration Scroll



Andrew P. Biddle

Patron of Postgraduate Medical Education.

End of Third General Assembly

THURSDAY MORNING
September 23, 1943

Fourth General Assembly

Ballroom—Statler Hotel, Detroit

C. R. Keyport, M.D., Presiding
L. Fernald Foster, M.D., and Wm. S. Jones, M.D., Secretaries

A. M.

9:30 "Treatment of Open Fractures"

Kellogg Speed, M.D., Chicago, Illinois



Kellogg Speed

Professor of Surgery (Rush), University of Illinois Medical College.

Defining open fracture as one communicating with the air from whatever cause or route the treatment is outlined as follows: The patient himself, the conditions under which he is found, his state of shock as from hemorrhage, the various methods of combatting blood loss; the condition of the wound at the time of first aid, means and methods of splinting and fixation and preparation for transportation.

When definitive treatment is possible in hospital or suitable surroundings an assay of the wound and fracture before débridement is required, the period of contamination is mentioned and the operation described. Internal fixation and types of splinting and their use, are outlined, including the Stader splint. The use and dangers of sulfa drugs and antitetanic serum are covered and other antiseptics are mentioned.

10:00 "Certain Observations on Headache of Intranasal Origin"

H. I. Lillie, M.D., Rochester, Minnesota



H. I. Lillie

Chief of Section on Otolaryngology and Rhinology, Mayo Clinic; Professor of Otolaryngology and Rhinology, Mayo Foundation, University of Minnesota.

Headache should be looked upon as a symptom and not as a disease. The headaches caused by certain intranasal conditions will be discussed from the personal clinical experience of the speaker. Such headaches group themselves into rather definite patterns and should be readily recognized. Lantern slides of schematic drawings will, it is hoped, demonstrate the

site and character of the conditions within the nose commonly encountered as causative factors in producing headache. Appropriate treatment is effective in relieving the distress.

10:30 "Wartime Obstetrics"
E. D. PLASS, M.D., Iowa City, Iowa



Professor and Head of Department of Obstetrics and Gynecology, State University of Iowa.

E. D. PLASS

Personnel deficiencies are dictating many attempts to reduce the professional care of obstetric patients to the essentials consistent with safety for mother and baby. Luxury items must be eliminated, for time must be saved.

An attempt will be made to evaluate prewar ideas of adequate obstetric care and treatment in terms of their essentiality—what must be retained? what can be eliminated? how can available professional skills be spread thinner without undue additional risk? how do newer techniques fit into the theme of simplification?

11:00 The Health Needs of the Nation as Revealed by Selective Service
COL. L. G. ROWNTREE, M.C., A.U.S., Washington, D. C.



COL. L. G. ROWNTREE

Selective Service is slowly but surely uncovering the health needs of the nation. As the agency charged with the procurement of manpower for the fighting forces and now also for industry, Selective Service, along with the Armed Forces Induction Stations, is examining and classifying millions upon millions of registrants.

Statistical surveys are disclosing the number and kinds of defects, deficiencies, disorders and diseases of the nation in an accurate manner and on an unprecedented scale. As a result of these studies there is emerging a national picture of disease. This involves incidence and kind in relation to age, race, geography (regions—states and county), occupation, economic status and residence (urban and rural). The picture is more somber than anticipated. It appears, however, that medicine has done an excellent job and fortune has favored us to date in the control of infectious diseases. The major problems now facing us are in the fields of nervous, mental and functional diseases, illiteracy, degenerative, dental, and venereal diseases.

Careful study of the picture is of the utmost importance nationally since it reveals, locates, and defines the nation's failures of the past in matters of health and indicates present and future national needs in the fields of curative and preventive medicine and rehabilitation. The information acquired is just as valuable to the nation in times of peace as it is for war.

11:30 End of Fourth General Assembly
Half-hour Intermission to View Exhibits

—— PROGRAM of SECTIONS ——

Thursday

September 23, 1943, 12:00 to 1:30 p.m. (luncheons)

SECTION ON SURGERY

Ballroom

Chairman: R. H. DENHAM, M.D., Grand Rapids
Secretary: R. H. BAKER, M.D., Pontiac

(a) **"Experiences with the Use of Penicillin"** (20 min.)
COL. R. H. KENNEDY, M.C., A.U.S.
Percy Jones General Hospital, Battle Creek

(b) **Injuries of the Carpal Bones**—Lantern Slide Demonstration. (20 min.)
KELLOGG SPEED, M.D., Chicago, Illinois

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SECTION ON GYNECOLOGY AND OBSTETRICS

Michigan Room

Chairman: ROGER S. SIDDALL, M.D., Detroit

Secretary: RUSSELL DEALVAREZ, M.D., Ann Arbor

"Intrapartum Fever" (30 min.)
E. D. PLASS, M.D., Iowa City, Iowa

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SECTION ON OPHTHALMOLOGY AND OTOLARYNGOLOGY

Judge Woodward Room

Chairman: WM. S. JONES, *M.D., Menominee*
Vice Chairman: E. P. WILBUR, M.D., Kalamazoo
Secretary: J. J. MCDERMOTT, M.D., St. Joseph
Vice Secretary: J. LEWIS DILL, M.D., Detroit

OTOLARYNGOLOGICAL PROGRAM

"The Significance of the Clinical History in Otorhinolaryngology" (30 min.)
H. I. LILLIE, M.D., Rochester, Minn.

The clinical history may be of greater relative significance than the clinical or laboratory findings in arriving at a correct diagnosis is the opinion of the speaker. There seems to be a great tendency to neglect the relevant clinical history in otolaryngology. Certain significant facts pertaining to the history in certain clinical syndromes as applied to otolaryngology will be discussed informally.

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SECTION ON RADIOLOGY, PATHOLOGY, AND ANESTHESIA

Parlor F

ANESTHETISTS' MEETING

Discussion Conference on "An Evaluation of the Clinical Application of the Methods of Continuous Spinal and Continuous Caudal Anesthesia"

Discussion Leader: LT. EDW. B. TOUHY, M.C., A.U.S., Chief of Anesthesia and Operative Section, Percy Jones General Hospital, Battle Creek

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P. M.
1:30 Half-hour Intermission to View Exhibits

PROGRAM of —— GENERAL ASSEMBLIES ——

THURSDAY AFTERNOON
September 23, 1943

Fifth General Assembly

Ballroom—Statler Hotel, Detroit

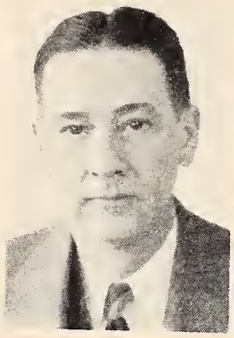
O. D. STRYKER, M.D., Presiding

L. FERNALD FOSTER, M.D., and R. H. DENHAM, M.D., Secretaries

P. M.

2:00 "The Challenge of Postwar Pediatrics"

A. ASHLEY WEECH, M.D., Cincinnati, Ohio



A. ASHLEY WEECH

Medical Director, Children's Hospital and Pediatric Service of Cincinnati General Hospital; Director, Children's Hospital Research Foundation; B. K. Rachford Professor of Pediatrics, University of Cincinnati.

The world is in a state of diabolically-inspired chaos, but out of its lessons are being learned which can be utilized in future years to provide increased health and happiness and in some measure repay those who are bearing the brunt of the present debacle. No one is interested in trying to promote another war, but it is fair to ask whether by preventive medicine we can rear another generation of young men who are more physically fit than those of the present. Much of this work will involve coöperation from all branches of medicine as well as statesmanlike guidance from those who are not Doctors of Medicine. Nevertheless, there will be much to occupy the mind of the physician who is interested in preventive pediatrics: for example (a) possibilities of preventing dental caries; (b) prevention of heart disease; (c) means of improving the psychogenic background in the home with a view of producing stable citizens less subject to the shellshocks of peacetime.

2:30 "Methods of Personality Study in Relation to Medical Problems"

J. C. WHITEHORN, M.D., Baltimore, Maryland



J. C. WHITEHORN

Henry Phipps Professor of Psychiatry and Director of the Department of Psychiatry of the Johns Hopkins University, and Psychiatrist-in-Chief of the Johns Hopkins Hospital.

Personality, as the organized system of attitudes through which one handles interpersonal relationships —well, poorly or perniciously—may greatly affect the organ systems through chronic and repetitive anxiety states and conditioned reactions. How may one recognize and characterize the personality trends disruptive of bodily health, in a manner useful in treatment? Discussion of the attitude examination and the use of the interview, social history and special techniques and tests in evaluating personality trends and their modifiability.

3:00 "War Casualties in a General Hospital in the U.S.A."

COL. R. H. KENNEDY, M.C., A.U.S., Battle Creek, Mich.



COL. R. H. KENNEDY

Colonel, MC, AUS, Chief of Surgical Service, Percy Jones General Hospital. In civilian life, Surgical Director, Beekman Hospital, and Attending Surgeon, New York Post-Graduate Hospital, New York City; Associate Clinical Professor of Surgery, Columbia University; Chairman, Committee on Fractures and Other Traumas, American College of Surgeons.

Patients are returning to this country in better condition than during the last war. They seem to have received definitive treatment earlier and of a more effective nature. Therefore it is practical to proceed with further treatment more promptly on arrival here. Skull defects are no longer allowed to remain. Artificial eyes are inserted early. The cooperation between plastic surgeons and dentists means much. Chest, abdominal and spinal injuries have been well treated and gas infection appears less of a problem. Plaster encasement has largely replaced traction. Vaseline gauze is regularly used for packing. The guillotine amputation is usual, but the necessity of immediate traction on the skin has not been sufficiently stressed. Prosthesis should be applied early. Nerve injuries and causalgia present a large problem. Malaria has become a usual companion on a surgical ward.

3:30 Half-hour Intermission to View Exhibits

4:00 Discussion Conferences with Guest Essayists

5:00 End of Fifth General Assembly



FRIDAY MORNING

September 24, 1943

Sixth General Assembly

Ballroom—Statler Hotel, Detroit

R. S. MORRISH, M.D., Presiding

J. FERNALD FOSTER, M.D., and J. J. MCDERMOTT, M.D., Secretaries

A. M.

9:30 "The Viral Pneumonias"

HOBART REIMANN, M.D., Philadelphia, Pennsylvania



HOBART REIMANN

Professor of Medicine, Jefferson Medical College.

During the past five years a form of pneumonia previously unrecognized has been found to be widespread. Because of certain peculiar characteristics of the disease, a filterable virus is supposedly the cause and a number of "new" viruses associated with pneumonias have been isolated. In the majority of cases, however, the cause is still unknown.

The clinical characteristics of the disease as contrasted with the better known forms of pneumonia, its epidemiology and its treatment will be discussed. Diagnosis is of especial importance since the sulfonamide compounds are useless in therapy and mortality rate is nil.

10:00 "Psychiatric Aspects of the Warring Nations"

WM. S. SADLER, M.D., Chicago, Illinois



WM. S. SADLER

Director, Chicago Institute of Research and Diagnosis, Formerly Professor, Post-Graduate Medical School of Chicago.

Nations are but aggregations of individuals. Individuals are subject to certain psychopathological disorders—certain emotional disturbances and personality distortions. Would it seem strange that national aggregations of individuals or racial assemblies of distorted individuals would likewise exhibit these same abnormal tendencies in their social, political, and international behavior?

This discussion is a serious attempt to apply certain psychiatric conclusions as concern individuals, to the present-day warring nations, more particularly the German and Japanese people.

In dealing with either the individual or the nation, accurate diagnosis is the one thing essential to successful treatment. This study is an attempt to make a diagnosis from the psychiatric standpoint, of Germany and Japan as our chief enemies in the present global struggle.

10:30 "Preventable Blindness"

PETER C. KRONFELD, M.D., Chicago, Illinois



PETER C. KRONFELD

Director of Education, the Illinois Eye and Ear Infirmary; Associate Professor of Ophthalmology, the University of Illinois.

In all his efforts the ophthalmologist is handicapped by the great delicacy and vulnerability and the very limited recuperativeness of the human eye. Since it is beyond human power to alter these characteristic qualities of the organ of sight, the ophthalmologist's hopes lie in the field of prevention of blindness rather than in that of restoration of sight. The main group of ocular diseases in which a striking improvement in the visual end-results and thereby a striking reduction in the incidence of blindness can be brought about in the United States by earlier recognition and intensification of treatment and follow-up are the glaucomas, the ocular diseases characterized by progressive loss of vision attributable to an abnormally high intra-ocular pressure. The advent of special glaucoma clinics for the indigent portion of urban populations marks a big advance in the campaign against glaucoma. All practicing physicians are requested to contribute toward the success of this campaign by suspecting the presence of glaucoma in every patient with progressive loss of vision until appropriate tests have proved the contrary.

11:00 "Dermatitis of War Industries in General Practice"

HARRY R. FOERSTER, M.D., Milwaukee, Wisconsin



H. R. FOERSTER

Assistant Professor of Dermatology, University of Wisconsin and Marquette University.

The accelerated program of industries engaged in production for war has resulted in an increase of dermatitis of various types among employes. This has created some new problems and accentuated old problems in diagnosis, treatment, and management. Some of these problems will be discussed as they concern the physician in general practice.

11:30 End of Sixth General Assembly

Half-hour Intermission to View Exhibits

—— PROGRAM of SECTIONS ——

Friday

September 24, 1943, 12:00 to 1:30 p.m. (luncheons)

SECTION ON GENERAL MEDICINE

Ballroom

Chairman: H. M. Pollard, M.D., Ann Arbor

Secretary: C. J. Smyth, M.D., Eloise

(a) **"Malaria—A Potential Current and Post-war Medical Problem"** (20) min.)

L. T. Coggeshall, M.D., Ann Arbor

(b) **"Problem of the Mild Psychoneurotic in the Army"** (20 min.)

Col. Walter B. Martin, M.C., and Lt. Col. Paul A. Petree, M.C., Percy Jones General Hospital, Battle Creek, Michigan

(c) **"Recent Advances in Therapeutics"** (20 min.)

Gordon B. Myers, M.D., Detroit

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SECTION ON PEDIATRICS

English Room

Chairman: Chas. F. McKhann, M.D., Ann Arbor

Secretary: Mark Osterlin, M.D., Traverse City

"Peculiarities in the Physiology of Newborn Patients" (30 min.)

Clement A. Smith, M.D., Detroit

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SECTION ON OPHTHALMOLOGY AND OTOLARYNGOLOGY

Parlor F

Ophthalmological Program

"Indications for Cyclodialysis" (30 min.)

Peter C. Kronfeld, M.D., Chicago, Illinois

Successful cyclodialyses consistently show the gonioscopic picture of a permanent supraciliary cleft which communicates widely with the anterior chamber. That the cleft and not an atrophy of the dialyzed portion of the ciliary body is the actual pressure-reducing principle is clearly demonstrated by the recurrence of hypertension if the cleft closes up. Since in all typical and uncomplicated cyclodialyses a supraciliary cleft is created at the time of the operation, the problem of its success or failure would seem to resolve itself in the recognition of the factors which favor or imperil the patency of the cleft during the period of postoperative reaction. This the writer has attempted to do on a group of cyclodialyses performed by different surgeons at the Illinois Eye and Ear Infirmary. This analysis has led to certain conclusions with regard to the indications for cyclodialysis.

P. M.

1:30 **Half-hour Intermission to View Exhibits**

FRIDAY AFTERNOON

September 24, 1943

Seventh General Assembly

Ballroom—Statler Hotel, Detroit

T. E. DeGurse, M.D., Presiding

L. Fernald Foster, M.D., and Chas. F. McKhann, M.D., Secretaries

P. M.

2:00 **"Small Unrecognized Strokes, a Commo Cause of Illness in Older Persons."**

Walter C. Alvarez, M.D., Rochester, Minn



Professor of Medicine University of Minnesota (Mayo Foundation). Editor of Gastro-enterology.

Walter C. Alvarez

The gastro-enterologist sees many persons past forty complaining of abdominal pain or distress, indigestion, perhaps a sudden large loss in weight, perhaps an inability to work, perhaps aches and pains all over. The diagnosis must be made from the history, which is that the distress came suddenly one day, perhaps with a fall, or a spell of dizziness, vomiting or mental confusion. Most significant in many cases is the associated disability which is out of proportion to the other symptoms. There may be character changes, loss of memory, loss of interests, and perhaps loss of all joy in life.

2:30 **"Abnormal Uterine Bleeding Past Middle Age, and Its Management"**

Robert D. Mussey, M.D., Rochester, Minn.



Head of Section on Obstetrics, The Mayo Clinic and The Mayo Foundation.

Robt. D. Mussey

Some 200 consecutive case records of patients with abnormal uterine bleeding examined in the year 1937 were studied to determine the various causes of such bleeding and their relative incidence, and to review diagnostic criteria and methods of treatment. In so far as it is possible this subject is treated from the viewpoint of the examination and diagnosis of the ambulatory or office patient for whom one or more of various methods of treatment may be advised, such as, medical, hormonal, radiologic or surgical; results of treatment are reviewed.

(T. R. Wilson, M.D., is co-author of this paper.)

3:00 **"Poliomyelitis: Contrast Between the Kenny and Orthodox Concepts, with Results of Treatment"**

SISTER ELIZABETH KENNY, Minneapolis, Minnesota



Originator of Kenny Method of treatment for poliomyelitis; Honorary Director of Elizabeth Kenny Institute, Minneapolis.

SISTER KENNY

Infantile paralysis has been regarded in the past as a disease causing muscles of the body to become hypotonic and flaccid. Treatment for such condition was to rest the supposedly affected muscles by the application of splints and casts. On the contrary the muscles affected by the disease of infantile paralysis are hyperirritable and in spasm. The toneless and supposedly paralyzed muscles are the normal muscles. It is obvious that the true symptoms of the disease are quite the reverse from that of the previous conception. It follows that a treatment devised for flaccid paralysis could not be adapted to a disease in which the muscles have the averse condition or spasm of the muscles. Spasm is the damaging condition in acute infantile paralysis. Spasm in muscle precedes paralysis and causes destruction of muscles, shortening of muscles, and eventually produces deformities. Treatment properly designed and instituted early will prevent undesirable after-effects.

Attendance at this meeting will be limited to Doctors of Medicine.

A special meeting for the public, at which Sister Kenny will be guest speaker, has been arranged for Friday, September 24, 8:30 p.m., Ballroom, Statler Hotel, Detroit.

3:30 **Half-hour Intermission to View Exhibits.**

4:00 **Discussion Conferences with Guest Essayists.**

5:00 **End of Seventh General Assembly.**

END OF SCIENTIFIC SESSION

THE 60 EXHIBITS WILL REMAIN OPEN FOR YOUR INSPECTION UNTIL 6 P.M. ON WEDNESDAY AND THURSDAY, SEPTEMBER 22-23; UNTIL 2 P.M. ON FRIDAY, SEPTEMBER 24.

An Invitation to YOU

Doctor, you are urgently invited to attend the 1943 Postgraduate Conference on War Medicine to be held at the Statler Hotel, Detroit, Wednesday, Thursday, Friday, September 22, 23, 24.

The Conference will cover the entire field of Medicine and present those modern diagnostic and therapeutic agents which, when used in your daily practice, will shorten your labors materially.

These stars in the medical firmament have important information on the practice of medicine in wartime—messages that will CONSERVE YOUR TIME by aiding you to recognize disease quickly and to use the most modern therapy:

Wednesday: ★Paullin ★Lahey ★Ormsby ★Jenkinson ★Cannon ★Schumann ★McQuarrie

Thursday: ★Speed ★Lillie ★Plass ★Rowntree ★Kennedy ★Tuohy ★Weech ★Whitehorn

Friday: ★Reimann ★Sadler ★Kronfeld ★Foerster ★Martin ★Alvarez ★Mussey ★Sister Kenny

Daily Quiz Periods have been arranged so you may discuss your cases with the guest essayists. Two postgraduate credits will be gained by attending the Conference.

THREE DAYS IN DETROIT—SEPTEMBER 22, 23, 24—WILL SAVE YOU WEEKS OF STUDY, RESEARCH, DOUBT AND WORRY. THEY WILL MAKE UNNECESSARY YOUR TRAVELING ALL OVER THE COUNTRY FOR A WEALTH OF SCIENTIFIC INFORMATION.

Fraternally yours,

H. H. Cummings

President, MSMS

TECHNICAL EXHIBITS

Baker Laboratories **Booth No. 40**
Cleveland, Ohio

Baker's Modified Milk, a completely prepared milk formula in both the powder and liquid forms, will be on display; also Melcose, a low-cost, but a completely prepared milk formula, and Melodex (maltose and dextrin) a carbohydrate made especially for modifying fresh or evaporated milk formulas. Our representatives will be glad to explain the merit of these foods, as well as the special advantages of using them today in view of food shortages, milk rationing, and other allied conditions.

Bard-Parker Company, Inc. **Booth No. 6**
Danbury, Connecticut

The following products will be exhibited at the Bard-Parker Booth No. 6: Rib-Back Surgical Blades, Long Knife Handles for deep surgery, Renewable Edge Scissors, Formaldehyde Germicide and Instrument Containers, Transfer Forceps, Hematological Case for obtaining bedside blood samples.

Ernest Bischoff Company **Booth No. 52**
Ivoryton, Connecticut

In our exhibit we shall feature Lobelin Bischoff, respiratory stimulant and resuscitant in asphyxia neonatorum; Anayodin, an effective, nontoxic amebacide; Diatussin and Diatussin Syrup, antispasmodic; Activin, a foreign protein for non-specific therapy; Viscysate, for the symptomatic relief of hypertension; Sas-Par, antipruritic, oral treatment for psoriasis.

The Borden Company **Booth No. 49**
New York, New York



Today, with more American babies to be fed than ever before, The Borden Company is resolved to use every available resource to maintain an unfailing supply of scientific formula foods which provide the well balanced nutrition so essential in early life. These include Biolac, New Improved Dryco, Mull-Soy, Klim, and Merrell-Soule Powdered Milks.

Burroughs Wellcome & Co. (U. S. A.) Inc. **Booth No. 27**
New York, New York



Burroughs Wellcome & Co. (U.S.A.) Inc., New York (Booth No. 27), presents a representative group of fine chemicals and pharmaceutical preparations, together with new and important therapeutic agents of special interest to the medical profession.

Cameron Heartometer Co. **Booth No. 42**
Chicago, Illinois

The Cameron Heartometer Company is showing the improved Heartometer, a scientific precision instrument for accurately recording systolic and diastolic blood pressures. It also furnishes a permanent graphic record of the pulse rate, the nervous functioning of the heart, the myocardial activity, as well as the functioning of the valves. The Heartometer clearly reveals heart disturbances in both early and advanced stages and is of great value in watching the progress of medication and treatments.

Cameron Surgical Specialty Co. **Booth No. 1**
Chicago, Illinois

See the Cameron Flexible Gastroscopes and Cavicamera, the new Rosi Coagulo-Sigmoidoscope, Bronchoscopes, Esophagoscopes, Laryngoscopes, Binocular Prism Loupe, Mirrolite, Color-Flash Clinical Camera, Magniscope, and other new developments in electrically lighted Diagnostic and Operating Instruments for all parts of the body. Cameron Electro Surgical Units (the genuine Radio Knives) will also be on display.

S. H. Camp and Company **Booth No. 1(**
Jackson, Michigan

S. H. Camp & Company, Jackson, Michigan, will exhibit a reproduction of the Camp Transparent Woman as the central theme of their display. The company's authorized dealers are equipped to serve patients for the various supports prescribed by physicians. The complete line of merchandise for prenatal, postnatal, visceroptosis, sacro-iliac, hernia and other specific conditions will be shown. Experts from the Camp Staff will be in attendance to answer questions.

Ciba Pharmaceutical Products, Inc. **Booth No. 57**
Summit, New Jersey

Physicians are cordially invited to visit the Ciba exhibit, where our Mr. Raymond S. Adamson will be in attendance and will gladly discuss any questions regarding the well-known CIBA specialties, including the newest, Privine Hydrochloride, a potent vasoconstrictor, and Trasentine-Phenobarbital, an effective antispasmodic and sedative.

Cottrell-Clarke, Inc. **Booth No. 4**
Detroit, Michigan

To enable medical men in these busy war days to extend their services to more and more patients, Michigan's progressive case record house of Cottrell-Clarke, Inc., Detroit, are showing, not only the latest of their newer labor saving case record developments, but also various ideas in patients' appointment systems and other office procedure.

Cream of Wheat Corporation **Booth No. 58**
Minneapolis, Minnesota



In Booth No. 58, both "Enriched 5-Minute" and "Regular" Cream of Wheat will be on display. "Zing!", stabilized wheat germ, will also be available for inspection. It is an economical, high vitamin germ that has been specially stabilized to prevent rancidity.

Davis & Geck, Inc. **Booth No. 53**
Brooklyn, New York **and Cinema Room**

"This One Thing We Do"



Davis & Geck, Inc., will display its complete line of sterile sutures including a comprehensive group armed with swaged-on Atraumatic needles and designed for specific surgical procedures.

As in previous years, a further feature of this exhibit will be a motion picture theatre in which a diversified and timely program of surgical films, in full color, will be present daily.

Doho Chemical Corporation **Booth No. 12**
New York, New York

Animated Pathological Ear Exhibit. The Auralgan Exhibit consists of a model of the human auricle four feet high together with a series of twenty-four three dimensional ear drums, modelled under the supervision of outstanding otolgists. Each of these drums depict a different pathologic condition based upon actual case observation and prepared, in so far as possible, with strict scientific accuracy so as to be highly instructive and interesting to all physicians.

General Electric X-Ray Corporation **Booth No. 10**
Detroit-Lansing-Grand Rapids

We cordially invite the physicians and their families who attend this meeting to make use of the lounge facilities provided at our booth for their comfort. We particularly look forward to a visit from users of our equipment and a cordial invitation is extended to all physicians who may have technical problems to discuss with our staff in attendance.

Gerber Products Company **Booth No. 41**
Fremont, Michigan



Gerber's Cereal Food and Strained Oatmeal are fortified with vitamins of the B-complex and with iron. They are ready-to-serve upon addition of milk or formula. These and the other Gerber Foods are on display. We invite your inspection of the Gerber literature.

Hack Shoe Company **Booth No. 14**
Detroit, Michigan

Hack shoes fill a wartime essential need for foot weary war workers. Fatigue and occupational foot strain are important considerations indicating the need for prescription of supportive shoes. Military styles are available for those in Army or Navy service.

Hanovia Chemical and Manufacturing Company
Newark, New Jersey **Booth No. 50**

Hanovia will exhibit the very latest in ultraviolet equipment for industrial clinics, etc., also an entirely new model lamp to irradiate large groups of employes. The fitness and determination of each and every worker is of supreme importance to the war effort. The new Hanovia ultraviolet quartz lamp helps in keeping employes physically fit. Don't fail to ask for complete details. Competent representatives will be on hand to greet you and be of whatever service they can.

J. F. Hartz Company **Booths Nos. 29-30**
Detroit, Michigan



The J. F. Hartz Company will be pleased to exhibit at the MSMS postgraduate war conference a full line of surgical instruments and equipment.

The display will feature Hartz Pharmaceuticals, which are manufactured under the strictest laboratory control. Qualitative and identity assays are run on all crude drugs before incorporating them in our products, and quantitative assays are carefully made on all finished products before they are released to the physicians.

H. J. Heinz Company **Booth No. 5**
Pittsburgh, Pennsylvania

All physicians practicing pediatrics or prescribing soft diets should see the Heinz display featuring Strained and Junior Foods.
Be sure to register for the 11th edition of the Nutritional Chart, as well as our new Special Dietary Foods booklet and Baby's Diary and Calendar.

Holland-Rantos Company, Inc. **Booth No. 9**
New York, New York



The Holland-Rantos Co. will display the very latest industrial garments and beddings made from substitute products.

Be sure to examine the Rantex Caps and Masks, ideal for non-toxic nuisance dust.

Register for a sample of NYLMERATE, an antiseptic tincture for surgical treatment and first aid.

The universally known KOROMEX contraceptive specialities will be on display including the new Koromex Set complete, a combination package ideally suited for either prescription or dispensing purposes.

The G. A. Ingram Company **Booths Nos. 54-55**
Detroit, Michigan

The G. A. Ingram Company will be on hand to service their many customers with all materials available under present conditions, and with substitutes in the event the original materials and instruments are not available.

The Ingram Company is especially anxious that all members stop at their booth to see the Rhythmic Constrictor.

A. Kuhlman & Company **Booth No. 37**
Detroit, Michigan

A. Kuhlman & Co. will exhibit American Cystoscope Makers' cystoscopes and urological instruments and supplies, also C. R. Bard & Co.'s Bardex and Bardam catheters, etc., and a selected line of American made surgical instruments. The exhibit will be in charge of Henry A. Kuhlman. At convention time they will exhibit at their store at 3929 John R Street a valuable collection of old surgical instruments and equipment.

Lea & Febiger **Booth No. 13**
Philadelphia, Pennsylvania

Lea & Febiger will exhibit, in Booth No. 13, among their new works, Lichtman on Diseases of the Liver, Gall Bladder and Bile Ducts, Dyke and Davidoff on Roentgen Treatment of Diseases of the Nervous System, Moon on Shock and Moritz on The Pathology of Trauma. New editions will be shown of Gray's Anatomy, Speed on Fractures and Dislocations, Levinson & MacFate's Clinical Laboratory Diagnosis, Ballenger on the Nose, Throat and Ear, Ballenger's Manual of Otology, Rhinology and Laryngology, Boyd's Text-Book of Pathology and Kraines' Therapy of the Neuroses and Psychoses.

Lederle Laboratories, Inc. **Booth No. 51**
New York, New York

Lederle Laboratories, Inc., will exhibit their complete line of biologicals, including Globulin Modified Antitoxins; all of their pharmaceutical items with especial emphasis on sulfonamide products, oral as well as those for external use, such as sprays and ointments. Messrs. Sempowski, Gilbert, Faber and Oxley will be in attendance.

Libby, McNeill & Libby **Booth No. 59**
Chicago, Illinois

This exhibit features Libby's Homogenized Baby Foods and Evaporated Milk. Spectators see the story of these products explained in a slide film, and at the same time they listen in on an interesting dialogue over telephones at the booth. This dialogue can only be heard over the telephones.

The story itself is newsworthy, in that Libby's Baby Foods are homogenized by an exclusive Libby process whose advantages are succinctly described.

Eli Lilly and Company **Booth No. 19**
Indianapolis, Indiana

The Lilly exhibit is presented as a mark of respect for the Michigan State Medical Society. Many Lilly products will be shown and attending Lilly medical service repreesntatives will be pleased to aid physicians whenever possible.

J. B. Lippincott Company **Booth No. 56**
Philadelphia, Pennsylvania

Lippincott's headliner is the new one-volume war edition of Thorek's Modern Surgical Technic. Other significant and timely new Lippincott books are Ferguson's Surgery of the Ambulatory Patient, Strecker's Fundamentals of Psychiatry, Kampmeier's Essentials of Syphilology, Sappington's Essentials of Industrial Health, and Brown & McDowell's Skin Grafting of Burns.

The Liquid Carbonic Corporation **Booth No. 23**
Wall Chemicals Division
Detroit, Michigan

We plan to exhibit our complete line of anesthesia and resuscitating gases at the Detroit Meeting of the Michigan State Medical Society. Mr. Joseph Esop and Mr. Earl Madole will be in attendance.

M. & R. Dietetic Laboratories, Inc. **Booth No. 35**
Columbus, Ohio

M & R Dietetic Laboratories, booth number 35, will display Similac, a food for infants deprived partially or entirely of breast milk; also powdered SofKurd. Our representatives will appreciate the opportunity to discuss the merit and suggested application of these products.

Mead Johnson & Company **Booths Nos. 46-47**
Evansville, Indiana

"Servamus Fidem" means We Are Keeping the Faith. Almost every physician thinks of Mead Johnson & Company as the maker of Dextri-Maltose, Pablum, Oleum Percomorphum, and other infant diet materials. But not all physicians are aware of the many helpful services this progressive company offers physicians. A visit to Booths No. 46 and No. 47 will be time well spent.

Medical Arts Surgical Supply Company **Booth No. 60**
Grand Rapids, Michigan

We shall show Hamilton Medical Equipment which is still available and Master line of surgical instruments some short waves, diagnostic instruments, etc. Also, our laboratory line of pharmaceuticals including tablets, ointments, solutions and specialties will be on display.
We invite you to come in.
Mr. Lepard, Mr. Oosting, Mr. Allen, Mr. Hadden, Mr. Klaver, and Mr. Williams will be in attendance at the booth.

Medical Protective Company **Booth No. 3**
Fort Wayne, Indiana

The most exacting requirements of adequate liability protection are those of the professional liability field. The Medical Protective Company, specialists in providing protection for professional men, invites you to confer, at their exhibit, with the representatives there, "Germany" Schulz and George A. Triplett. They are thoroughly trained in Professional Liability underwriting.

Mellin's Food Company **Booth No. 33**
Boston, Massachusetts

An exchange of ideas relative to the feeding of infants and in regard to the nourishment for adults requiring a restricted diet are of much value in view of the importance of selecting food best adapted to the individual requirement.
The Detroit Meeting will afford an opportunity for such discussion with representatives of the Mellin's Food Company and members of the Association are cordially invited to call at Space 33.

Merck & Company, Inc. **Booth No. 20**
Rahway, New Jersey

A set of Vitamin Reviews, containing up-to-date and factual information, in a convenient slip-cover container designed for ready reference in library or book case, is available at the Merck booth. Mr. S. A. Gaffney, in charge of the exhibit, will also be pleased to supply information on other products of interest to physicians.

Wm. S. Merrell Company **Booth No. 48**
Cincinnati, Ohio

MERRELL
115th Year

The Merrell exhibit will feature clinical data demonstrating the effectiveness of oral vaccination with Oravax in reducing number, severity, and duration of colds, as reported in current medical literature. "Oravax offers the physician an opportunity to contribute manhours of production to the war effort by protecting colds-susceptible individuals against this greatest cause of disability.

Michigan Medical Service **Booth No. 26**
Detroit, Michigan

Graphic charts will be displayed showing the progress of Michigan Medical Service in its three years of operation, what makes a deficit, what corrects a deficit, how the plan needs the cooperation of the medical profession, how the medical profession may cooperate, what the medical profession is doing for the 450,000 people enrolled and how Michigan Medical Service is gradually being separated from Michigan Hospital Service.

C. V. Mosby Company **Booth No. 2**
St. Louis, Missouri

New publications to be displayed by the C. V. Mosby Company at Booth No. 2 will include Haid-Kessell "Tropical Diseases," Trueta "Principles and Practice of War Surgery," Titus "Atlas of Obstetric Technic," and Dodson "Operative Urology." New 1943 editions will include Clendening-Hashinger "Methods of Treatment," and Gradwohl's "Clinical Laboratory Methods and Diagnosis." Mr. Arthur Grabruck will be in attendance, ready to be of service in any way possible.

Pet Milk Company **Booth No. 28**
St. Louis, Missouri



A complete display of material illustrating the time-saving Pet Milk services available to physicians. Specially trained representatives will be in attendance to give you information about the production of Pet Milk and its use for infant feeding. Miniature cans will be given to each physician visiting the exhibit.

Parke, Davis & Company **Booths Nos. 44-45**
Detroit, Michigan



At the Parke-Davis Exhibit, which has been streamlined because of present wartime requirements, you will find many new and scientific Pharmaceutical and Biological Products. Included in this display are such outstanding preparations as Phemerol, a relatively non-toxic and non-irritating germicide and antiseptic; Vitamin Products; Sulfa Drugs; Despeciated Antitoxins, and numerous other outstanding products of timely interest. Able and courteous members of the Parke, Davis & Co. staff are in daily attendance to serve you.

Petrogalar Laboratories, Inc. **Booth No. 34**
Chicago, Illinois

Physicians are cordially invited to visit the Petrogalar exhibit at Booth No. 34 where a new and enlightening story on Petrogalar, an aqueous suspension of mineral oil, will be related. Beautifully colored anatomical drawings and new literature may be had upon request from our professional representatives who will be in constant attendance.

Philip Morris & Co., Ltd., Inc. **Booth No. 18**
New York, New York

Philip Morris & Company will demonstrate the method by which it was found that Philip Morris Cigarettes, in which diethylene glycol is used as the hygroscopic agent, are less irritating than other cigarettes. Their representative will be happy to discuss researches on this subject and problems on the physiological effects of smoking.

Picker X-Ray Corporation **Booth No. 25**
New York, New York

Picker X-Ray Corporation will show the U. S. Army Field Unit as well as the Light Weight Air Corps Unit of which they are exclusive manufacturers. This display of military medical equipment will be accompanied by a selection of interesting and authentic photographs showing the use of this apparatus under actual wartime conditions.

Procter & Gamble Company **Booth No. 31**
Cincinnati, Ohio

At the Procter & Gamble booth, visitors will see demonstrated some of the qualities of Ivory Soap which have resulted in Ivory's being recommended "By more doctors than all other brands of soap together."
Copies of Ivory's new baby booklet, "Bathing Your Baby the Right Way," prepared with the cooperation of a world famous maternity center, will be available free of charge to visitors.

Professional Management **Booth No. 11**
Battle Creek, Michigan



Professional Management again expresses its appreciation of the business of hundreds of Michigan doctors by making available to all who wish to stop, its knowledge and suggestions regarding withholding tax, income tax, office records and other phases of medical business.

Randolph Surgical Supply Company **Booth No. 21**
Detroit, Michigan

Randolph Surgical Supply Company will display office equipment that is available today, and will be of peace time construction.
The following representatives will be on hand to greet their many friends in the medical profession: Theo. Ward, Art Rankin, H. Stormhafer, and Cliff Randolph.

W. B. Saunders Company **Booth No. 22**
Philadelphia, Pennsylvania

This publishing house will exhibit their complete line of books, including such new ones as the Bockus' 3-volume work on "Gastro-enterology," Shaar & Kreuz' "External Fixation of Fractures," the Mayo Clinic Volume, Lundy's "Anesthesia," Wharton's "Gynecology," the Military Medical and Surgical Manuals, Official U. S. Public Health Service Industrial Hygiene Manual, Stiglitz' "Geriatrics," Cuttin's "Therapeutics," Dry's "Cardiology," Rehfuss' "Indigestion," Weissc & English's "Psychosomatic Medicine," and many others.

cientific Sugars Company **Booth No. 7**
olumbus, Indiana

Scientific Sugars Company, Columbus, Indiana, Booth No. 7, will display Cartose, Hidex, and the Kinney line of nutritional products. A new preparation of interest to physicians will be featured.

harp & Dohme **Booth No. 32**
hiladelphia, Pennsylvania

Sharp & Dohme will have their display at Booth No. 32, featuring 'Lyovac' Normal Human Plasma, other 'Lyovac' biologicals and biological specialties. There will also be on display pharmaceutical specialties including "Sulfasuxidine" succinyl-sulfathiazole, "Delvinal" Sodium, "Propadrine" Hydrochloride products, "Rabellon," "Depropranex," and "Prohexinol." A cordial welcome awaits all visitors.

S.M.A. Corporation **Booth No. 15**
Chicago, Illinois

Among the technical exhibits at the convention this year is an interesting display which represents the selection of infant feeding and vitamin products of S.M.A. Corporation. Physicians who visit this exhibit at Booth No. 15 may obtain complete information on S-M-A Powder and the special milk preparations —Protein S-M-A (Acidulated), Alerdex and Hypo-Allergic Milk.

Smith, Kline & French Laboratories **Booth No. 17**
Philadelphia, Pennsylvania

Benzedrine Sulfate tablets will be featured at this exhibit. It has been said that Benzedrine Sulfate offers "a therapeutic rationale which, in its very efficiency, cuts across the old categories." It is, therefore, useful in many widely varied fields of medicine.

Won't you call upon us if you desire information about the use of this highly important compound in depressive states; as an adjunct in the treatment of alcoholism; and in postencephalitic Parkinsonism, narcolepsy? One of our professional representatives will be glad to discuss with you its potentialities and possible indications in your own practice.

Benzedrine inhaler, N.N.R., "Paredrine Hydrobromide Aqueous," "Paredrine"—Sulfathiazole Suspension, Pragmasul and Eskay's Pentaplex will also be exhibited.

E. R. Squibb & Sons **Booth No. 24**
New York, New York

A number of new and interesting Vitamin, Glandular, Biological and Chemotherapeutic specialties will be featured in the Squibb Exhibit in Booth 24.

Well-informed Squibb Representatives will be on hand to welcome you and to furnish any information desired on the products displayed.

Frederick Stearns & Company **Booth No. 39**
Detroit, Michigan

Doctors are cordially invited to visit our attractive convention booth to view and discuss outstanding contributions to medical science developed in the Scientific Laboratories of Frederick Stearns & Company.

Our professional representatives will be pleased to supply all possible information on the use of such outstanding products as Neo-Synephrine for intranasal use, Amino Acids for parenteral protein feeding, Mucilose for bulk and lubrication, Ferrous Gluconate, Potassium Gluconate, Gastric Mucin, Susto, Trimax, Appella Apple Powder, Nebulator with Nebulin A, and our complete line of Vitamin products.

White Laboratories, Inc. **Booth No. 43**
Newark, New Jersey

Within recent years tremendous advances in vitamin research have added a wealth of clinical data to our knowledge of nutrition.

The intense interest of the laity, in the vitamins—often, unfortunately, confused and misled by unauthoritative lay advertising and uninformed "information"—can be properly controlled by the physician's interpretation of the actual usefulness of the vitamins to his patients.

In Booth No. 43 White Laboratories, Inc., presents its complete line of ethically promoted, clinically reputable vitamin preparations. Qualified representatives are in attendance to discuss with you the use of White's products in vitamin prophylaxis and therapy. Descriptive literature is available for your review, and a cordial welcome awaits you.

Winthrop Chemical Company **Booth No. 38**
New York, New York

John Wyeth & Brother, Inc. **Booth No. 8**
Philadelphia, Pennsylvania

You are cordially invited to visit the Wyeth exhibit where information will be available on any Wyeth Products and other services. The new treatment of Peptic Ulcer, "Phosphaljel" will be featured.

Zimmer Manufacturing Company **Booth No. 36**
Warsaw, Indiana

Zimmer Manufacturing Company will exhibit in Booth No. 36 the regular line of fracture equipment, and the popular Luck Bone Saw with all its attachments. Various other items that have been standardized by the U. S. Army and Navy will be on exhibition. The new instruments which have recently been designed by Dr. Walter P. Blount, along with the new Corbett Finger and Thumb traction splints, and the Zimmer Reduction and Retention Apparatus will be items of interest to every surgeon. Mr. C. A. Fisher, our Michigan representative, will be in charge of the booth.

Be Sure to Visit
Every Booth
There is much that is
new and interesting.

CONSTITUTION-BY-LAWS' CHANGES CONCERNING DELEGATES

The 1942 MSMS House of Delegates amended Article 4, Section 3 of the Constitution to include the immediate past-president of the State Society as a member at large of the House of Delegates, with the right to vote and hold office. In addition, all past-presidents now have a right to the floor in the House of Delegates accorded to a regular Delegate, but not the right to vote.

In the By-laws, Section 2 was changed so that a member must be either an active member—or a Member Emeritus—of the State Society for at least two years preceding election as Delegate.

Section 3 was changed as follows: "Any Delegate-elect not present to be seated at the hour of call of the first session may be replaced by an accredited Alternate next on the list as certified by the Secretary of the County Medical Society involved."

Finally, Section 7(n) was amended so that all resolutions introduced into the House shall be in triplicate (not duplicate).

To our business friends in the Technical Exhibit, the Michigan State Medical Society expresses sincere thanks for their splendid coöperation and very tangible conrtbution to the great success of the 1943 Conference.

YOU AND YOUR BUSINESS

PLAN FOR A VENEREAL DISEASE CONTROL PROGRAM IN INDUSTRY*

I. Objectives of Venereal Disease Control Program in Industry

A. Medical and Public Health:

1. To find and refer for proper medical management all cases of venereal diseases among industrial personnel, including both labor and management.
2. To establish equitable policies for the employment of applicants and continuation of services of employes who have venereal diseases.
3. To coördinate the community and industrial venereal disease control programs.

B. Employes:

1. To improve the physical condition of employes.
2. To reduce the number of work-days lost through illness or injury.
3. To provide job placement in order that the service of individuals having syphilis or gonorrhea may be employed at work which they are physicially capable of performing with profit to themselves and to their employer, and without risk to themselves, to fellow workers and to the public.
4. To prolong and increase the earning power of employes by increasing life expectancy.

C. Employer:

1. To reduce compensation costs.
2. To lessen work interruptions and labor turnover.
3. To enhance production by increasing the efficiency of workers.
4. To minimize those personnel problems which arise from syphilis and gonorrhea as causes of ill health and nervous instability.

II. Principles and Methods to be Employed

In formulating a Venereal Disease Control Program in Industry, it is recommended that certain agencies be consulted in order to assure agreement in all phases of fundamental policy. In order to effect such an understanding, officers charged with the responsibility of this program in state health departments are urged to discuss their plans with the following statewide agencies: (1) Labor organizations; (2) the *industrial health, venereal disease,* or other appropriate committees of the state medical society; (3) the associations representing employers.

III. Administration of the Program

Responsibility for the administration of the program should be shared by the industrial hygiene and venerea disease divisions of the state health department.

IV. Examination

Health supervision of workers should include a careful history, physicial examination, such special examinations as may be indicated, and laboratory tests Included in the latter should be a serodiagnostic test for syphilis and, when indicated, a smear or culture for gonorrhea. In order that the venereal disease control program may be effective, pre-employment examinations should be mandatory for all workers.

V. Employment Policy

There is no reason for denying employment to an applicant or for discharging an employe because an examination has revealed evidence of syphilis or gonorrhea, provided:

1. That the employe agree to place himself under competent medical management.
2. That, if the stage of the disease is infectious, employment should be delayed or interrupted until such time as a non-infectious state is established through treatment and open lesions are healed.
3. That, when syphilis exists in a latent stage, employment should not be delayed or interrupted.
4. That, when disabling manifestations exist which would render such individuals industrial hazards to themselves, other employes or the public, employment may be deferred or denied.
5. That provision be made, whenever possible, for occupational readjustments of employes who develop disabling manifestations that do not incapacitate them from performing some type of useful work.
6. That workers with syphilis in any of its stages, and regardless of past or present treatment status, should be excluded from areas of toxic exposure, and that those having cardiovasular syphilis or neurosyphilis should not be exposed to such physiologic stresses as extremes of temperature, strenuous physical exertion or abnormal atmospheric pressure.
7. That workers with gonorrhea should be allowed to work only under special medical observation during the administration of sulfonamide drugs.

VI. Conference for Persons who have Evidence of a Venereal Disease

The applicant or the employe whose examination reveals evidence of a venereal disease should be called to the industrial physician's office for a conference.

The worker whose infection is found to be communicable should be referred to his family or other qualified physician for confirmation of diagnosis and such treatment as may be indicated.

(Continued on Page 752)

*Plan adopted by V. D. Com. of MSMS and Michigan Department of Health.

So Outstandingly Convenient

that the physician may overlook the fact that it is,

first and foremost, a highly effective therapeutic agent.



Benzedrine Inhaler

In a Modern Plastic Tube

Each Benzedrine Inhaler is packed with racemic amphetamine, S.K.F., 250 mg.; oil of lavender, 75 mg.; and menthol, 25 mg. Benzedrine is S.K.F.'s trademark, Reg. U. S. Pat. Off., for their Inhaler and their brand of racemic amphetamine.

SMITH, KLINE & FRENCH LABORATORIES, PHILADELPHIA, PA.

KARO is KARO
whether
the label is
Red or Blue

Your patients may have a preference for either Red Label *or* Blue Label KARO. If their grocers are temporarily out of their favorite flavor, you may assure them that *flavor* is the only difference between these two types of KARO for infant feeding.

Each contains practically the same amount of dextrins, maltose and dextrose so effective for milk modification.



How much KARO for Infant Formulas?

The amount of KARO prescribed is 6 to 8% of the total quantity of milk used in the formula—one ounce of KARO in the newborn's formula is gradually increased to two ounces at six months.

CORN PRODUCTS REFINING CO.
17 Battery Place • New York, N. Y.

When the examination of an applicant or emplo shows evidence of a latent stage of the disease, esp cially syphilis, wherein the only evidence of infecti is a positive serologic test, no delay in suitable emplo ment is justified. The worker should be told of h condition and referred to his family physician. T provision of continued treatment is the same as pr viously described.

VII. Follow-up

It will be helpful and subsequently save considerab confusion if the industrial physician will provide th worker with a letter direct to his physician, stating th circumstances of the examination, results and what expected of the worker as regards regularity of trea ment, if he is to be employed.

Should the worker be employed or his services co tinued, it is advisable that the industrial physician re ceive a record of treatment at about monthly interva giving assurance that the patient is receiving appropria medical attention.

In the event treatment is interrupted and the worke refuses to resume treatment, the industrial physicia should notify the management that the employe is n longer fit for work. The names of such individual should be turned over to the health department fo appropriate action in bringing them back for treatmen

VIII. Morbidity Reports

It is the responsibility of the physician furnishin treatment to submit such reports in most instance However, in view of the urgent necessity of placin infectious syphilis and gonorrhea promptly under medi cal control, the plant physician making a tentative diag nosis of communicable syphilis or gonorrhea shoul without delay acquaint the appropriate health authorit with the facts.

IX. Educational Program

It is important that the educational program be pre sented in an effective manner. The several medium that are available should be carefully selected in ac cordance with their suitability under varying condi tions. These media include posters, folders, pamphlets articles published in management and employe maga zines and, in addition, the presentation of the subjec by speakers and motion pictures. Pamphlets and fold ers for distribution may be kept in the wall racks located in places frequented by workers; they may also be distributed after lectures and motion picture showings. Posters may be displayed effectively or bulletin boards placed in plants, union meeting rooms and other locations where employe assemblages are held

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REVISION OF THE WORKMEN'S COMPENSATION LAW*

Do you know about the recent changes in the Workmen's Compensation Act as amended by the 1943 Michigan Legislature, and how these changes may affect you and your Company?

*Prepared by Industrial Division, Michigan Department of Health.

For your convenience, the major revisions of greatest interest to you are enumerated below with a brief description of each. More detailed information relative to this law (Act 245, P. A. 1943) may be obtained by writing to the Director, Bureau of Industrial Hygiene, Michigan Department of Health, Lansing, Michigan.

1. The Act applies to all employers regularly employing eight or more workers. It does not apply to employers subject to the provisions of any federal employers' liability law, nor does it apply to farm laborers or domestics.

2. The Act provides compensation for all occupational diseases or injuries (blanket coverage) in contrast to the scheduled thirty-one diseases appearing in the old law.

3. The Act provides double compensation for injuries to minors illegally employed.

4. The Act provides for increased liability on the part of the employer for medical care. The period for his responsibility has been increased from ninety days to six months with an additional six months possible at the discretion of the Commission, upon written request of the employe and after the employer or his insurer has been given an opportunity to file objections.

5. The Act provides for increased benefits up to $21.00 per week for injury or illness and a graduated scale of death benefits up to $27.00 per week based upon the number of dependents. In no case shall the period covered by such compensation be greater than 500 weeks from the date of the injury, nor shall the total amount of all compensation exceed $10,500.00 except for permanent and total disability, when compensation shall be paid for 750 weeks from the date of injury.

6. The Act provides for waivers for silicosis and other dust diseases of the lungs under special circumstances. This clause practically makes it mandatory for industry to adopt a medical program for self-protection. It not only compels management to examine all new employes, but also those currently employed, since industry becomes liable for all dust diseases of the lungs not formerly covered by the old law. Prior to this amendment, silicosis was compensable only in the mining industry. Similar cases existing in other industries now are compensable and if not discovered by medical examination and a waiver obtained, the Company is held liable. Written request for such waiver must be filed with the Michigan Department of Labor and Industry on or before 120 days from July 30, 1943, the effective date of the new law.

If an employe is not examined, the Company employs him "as is" and becomes liable for compensation. Therefore, it behooves management to establish an adequate medical program and develop a complete filing system of medical records for each individual employe.

BEVERIDGE PLAN COST

Sir William Beveridge, who can hardly be accused of underestimating the people's fat contribution under his plan, makes it clear that the insured can be expected to supply scarcely more than about 25 per cent of the total cost as seen from the comparison set forth on page 206 of the Beveridge Report:

Contributions from:	1945 Per Cent	1955 Per Cent	1965 Per Cent
Insured persons	28	25	22
Employers	20	18	15
Interest on existing funds	2	2	2
Government	50	55	61
TOTAL	100	100	100

STILL THE SAME OLD JOHNNIE WALKER



BORN 1820 . . .
still going strong



Unchanging quality has made Johnnie Walker a well-known character all over America.

Due to British war restrictions, gold foil has been eliminated and other slight changes have been made on the *outside* of the familiar Johnnie Walker bottle—but *inside* good old Johnnie Walker whisky remains unchanged.

RED LABEL
8 YEARS OLD

BLACK LABEL
12 YEARS OLD

Both 86.8 proof

JOHNNIE WALKER

BLENDED SCOTCH WHISKY

CANADA DRY GINGER ALE, INC.
New York, N. Y. • *Sole Importer*

MICHIGAN'S DEPARTMENT OF HEALTH

H. ALLEN MOYER, M.D., Commissioner, Lansing, Michigan

OLDER HIGH SCHOOL BOYS WILL BE EXAMINED AGAIN

Medical examinations to determine the physical condition of older high school boys will be given in many Michigan towns and cities with the opening of the fall term next month. The examinations were instituted a year ago at the behest of health science groups which were concerned about percentages of under-par youths reported by Selective Service medical boards.

Full-time county and district health departments will again work out details of examinations in areas they serve. The Bureau of Local Health Services of the Michigan Department of Health is the coördinating agency.

LABORATORIES PERFORM WEIL'S DISEASE TESTS

The Bureau of Laboratories of the Michigan Department of Health is prepared to perform agglutination tests with leptospiral antigens in the diagnosis of Weil's disease. Clotted specimens of blood should be submitted during or following the second week of illness.

Leptospira may also be demonstrated by animal inoculation in the peripheral blood in the first week of illness and in the urine during the second and third weeks. Specimens for animal inoculation should be obtained asceptically. Urine specimens must be fresh and alkaline in reaction. Consultation with the local full-time health officer is desirable before submission of specimens for animal inoculation procedures.

MOTOR VEHICLE DEATHS DECLINE 40.4 PER CENT

A 40.4 per cent decline in Michigan traffic deaths during the first six months of 1943 as compared with the like period last year is reported by the Michigan Department of Health. Motor vehicle accidents claimed 402 lives in the six-month period this year; 675 in the like period last year. Five-year (1938-1942) average for the period is 703 deaths.

The 1943 figures are provisional; may be increased if others injured during the period should fail to recover.

23 PER CENT INCREASE IN DROWNINGS REPORTED

One hundred and forty-four deaths by drowning in Michigan waters during the first six months of 1943 represent a 23 per cent increase over the 117 drowned in the corresponding period last year, the Michigan Department of Health reports. Five-year (1938-1942) average for the period is 120 deaths.

STANDARDS OF SANITATION IN TRAILER PARKS UPHELD

Basic sanitation standards for trailer coach parks, defined by 1941 statute and intended to improve toilet, bath, washroom and sewage disposal facilities, have not been relaxed this summer despite the fact that vacation business in Michigan resort areas has been hard hit by wartime travel restrictions.

"Our engineers and sanitarians insist on good water supplies and good sanitation," says Commissioner Moyer. "Wartime shortages of materials block many needed improvements in parks, but we cannot afford to ease the regulations which have given Michigan its enviable reputation as a 'healthy' vacation state."

Temporary operating permits are issued to trailer park proprietors when sanitation standards are met.

Only those park proprietors in war industry areas, however, are able to secure priorities that release materials for park improvements.

SEVENTIETH ANNIVERSARY OF DEPARTMENT OBSERVED

Seventieth anniversary of the organization of the first State Board of Health, forerunner of the present Michigan Department of Health, fell on July 30. Michigan was the fifth state to create such a board, antedated by Massachusetts in 1869, California in 1870, Virginia and Minnesota in 1872.

The law establishing the board was enacted by the 1873 legislature and was signed by Gov. John J. Bagley. A similar bill had failed in 1871, support of the 1873 legislature having been gained by demonstrations of the dangers to public safety and health from uninspected and extremely inflammable kerosene then being sold for lighting purposes and from arsenic-tinted wallpapers.

MOSQUITO IDENTIFICATION IS CONTROL PRELIMINARY

As part of the job of finding out how great may be the threat of spread of malaria in Michigan, sanitarians of county and district health departments are enlisted to capture mosquitoes found in their localities, identification to be made at the University of Michigan. A Michigan State College entomologist, Curtis W. Sabrosky, also has been engaged by the Michigan Department of Health and is making similar identification of mosquitoes found along the Kalamazoo river before he moves into other areas of the state. Control measures are most successful and cost least when such identification of malaria-carrying mosquitoes has been made.

SELECTIVE SERVICE TESTS AID FIGHT AGAINST TUBERCULOSIS

Physicians qualified to interpret chest x-ray pictures have been named by Selective Service in each of 14 districts, outside Wayne county, into which the state has been divided and are studying chest pictures of rejected candidates for the armed services.

Occasionally these further studies result in reëxamination and induction of men previously rejected. More often, selectees who are turned down for induction by

medical examining boards because chest x-rays show evidence of tuberculosis are brought to the attention of health officers in their home districts who arrange for their treatment.

The Bureau of Tuberculosis Control of the Michigan Department of Health is furnished reports of local examining boards and supervises follow-up activities which secure treatment for rejectees when its need is indicated.

MILLION AND A HALF DOLLARS SPENT TO REMOVE HAZARDS

A million and a half dollars was spent by Michigan manufacturers during the fiscal year ending with June in correcting industrial hazards, the Bureau of Industrial Hygiene of the Michigan Department of Health reports.

The expenditure represented 85 per cent compliance with recommendations of Bureau physicians and engineers and will be increased as recommendations made during the final weeks of the year are carried out.

Money spent to protect employes from injury or illness was almost double the expenditure in the preceding fiscal year and four times as much as was spent in the fiscal year 1940-41.

Bureau physicians and engineers completed 705 plant surveys or studies during the period. On their recommendation, medical care programs were adopted in almost 100 Michigan industrial plants.

POSTGRADUATE ASSEMBLY ON NUTRITION

A Postgraduate Assembly on Nutrition in Wartime, sponsored by the Institute of Medicine of Chicago, will be held on Wednesday and Thursday, November 17 and 18, 1943, in the Palmer House, Chicago, and will be devoted to phases of nutrition that are of particular interest to practicing physicians, dentists, nutritionists, and dietitians at this time. There will be no fees and all members of the above professions in the Midwest are invited to register. Complete program and registration blank can be secured by addressing: The Institute of Medicine of Chicago, 86 East Randolph Street, Chicago 1, Illinois.

MEDICAL-LEGAL PHASES OF INDUSTRIAL EMPLOYMENT OF HANDICAPPED WORKERS

(Continued from Page 726)

sons for which employment must be found. All the legal stumbling blocks should be removed. I hope that in Michigan within the not too distant future, statutory provisions covering the fields of physical examination and waivers for physical defects can be put into effect. Perhaps our new second injury fund and our very limited waiver provision may operate as the spring board for such desirable legislation.

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MEDICINE—Two Weeks' Intensive Course starting October 4. One-month Course in Electrocardiography and Heart Disease.
FRACTURES & TRAUMATIC SURGERY—Two Weeks' Intensive Course starting October 18.
GYNECOLOGY—One-week Personal Course in Vaginal Approach to Pelvic Surgery starting November 1. Clinical and Diagnostic Courses.
OBSTETRICS—Two Weeks' Intensive Course starting October 4.
ANESTHESIA—One-week Course in Continuous Caudal Anesthesia for Obstetrics.
OPHTHALMOLOGY—Two Weeks' Intensive Course starting September 27. Course in Refraction Methods, October 11.
OTOLARYNGOLOGY—Two Weeks' Intensive Course starting September 13.
ROENTGENOLOGY—Courses in X-Ray Interpretation, Fluoroscopy, Deep X-Ray Therapy every week.
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IN MEMORIAM

Frank Braley of Saranac was born in 1861 in Farmington, Pa., and was graduated from the Detroit Medical School in 1897. He practiced at Palo for two years before locating at Saranac where he remained for forty-five years, more than thirty of which he served as health officer. He was president of the board of education thirty-five years. Doctor Braley died June 15, 1943.

James R. Breakey of Ypsilanti was born March 9, 1864, in Ypsilanti and was graduated from the University of Michigan Medical School in 1889. He located in Alma Center, Wisconsin, where he remained until 1900 when he returned to the University of Michigan to study pathology. After finishing his course, he returned to Alma Center where he established his own laboratory. In 1915 he returned to Michigan and located in Ypsilanti. Doctor Breakey was active in many civic organizations and was permanent secretary of the University of Michigan Medical class of 1889. In 1929 he was inducted into the Emeritus Club of the University Alumni Association composed of graduates of fifty years. He died on June 22, 1943.

Joseph DeHoratis of Detroit was born in Italy in 1879 and was graduated from the University of Naples in 1905. He came to Michigan in 1906 to take a course at the Detroit College of Medicine. Active in the life of the Italian colony he was a generous contributor to various public charities as well as to his patients and their families. He was a victim of the Detroit riot and died June 23, 1943.

Irving W. Greene of Owosso was born July 17, 1889, in Columbia Township, St. Clair County and was graduated from the University of Michigan Medical School in 1913. After graduation he practiced medicine with his father, the late Dr. Charles Greene of Richmond. During the first World War he served in the Army Medical Corps, with the rank of 1st Lieut. at Camp Sherman, Ohio. After the War, he took a postgraduate course at Harvard Medical School and then moved to Ann Arbor to become instructor at the University of Michigan Medical School and a member of the outpatient staff. After three years of teaching, he entered private practice in Owosso where he was head of the laboratory and x-ray departments at Memorial Hospital. Doctor Greene served as a Councilor of the Michigan State Medical Society from 1936 to 1941. He was president of the Shiawassee County Medical Society in 1928 and was its secretary at the time of his death on June 28, 1943.

B. Raymond Hoobler of Detroit was born May 5, 1872, in Standish, Michigan, and was graduated from

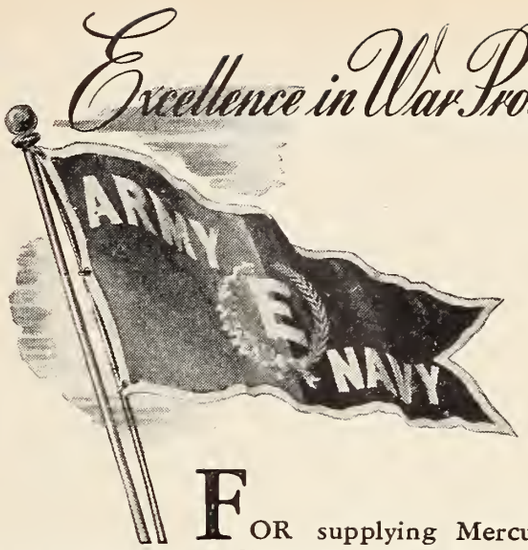
Cornell University Medical School in 1905. He began his career in New York on the staff of Bellevue Hospital and obtained a training in pediatrics. In 1914 he came to Detroit and later became Chief of the Medical Staff of Children's Hospital. He was professor and head of the department of Pediatrics at Wayne University College of Medicine from 1914 to 1936 and Emeritus Professor of Wayne University at the time of his death. He was a member of the staffs of Harper, Florence Crittendon, Booth Memorial and Receiving Hospitals. In his chosen field of pediatrics, Doctor Hoobler was an authority and made many contributions to medical literature. In 1930 he was forced on account of illness to give up his practice but continued actively on the many hospital staffs for several years when he was compelled to give up all outside work. He died June 11, 1943.

Leslie A. Howe of Breckenridge was born in Allen, Michigan, October 16, 1866, and was graduated from the University of Michigan Medical School in 1890. Doctor Howe maintained a practice in Breckenridge for fifty years. He was always active in civic affairs and had served as president, treasurer and clerk of the village. On September 24, 1940, he was elected to Emeritus Membership in the Michigan State Medical Society and had always been active in the Gratiot-Isabella-Clare County Medical Society. He died June 26, 1943.

Derk B. Lanting of Grand Rapids was born in Jamestown, Michigan, in 1873, and was graduated from Physicians and Surgeons College in Chicago in 1900. Doctor Lanting practiced twenty-two years in Jamestown, ten years in Byron Center and more than a decade in Grand Rapids. He died June 24, 1943.

Stanley V. Osgood of Clawson was born in Detroit, September 3, 1905, and was graduated from Wayne University College of Medicine in 1930. He interned at Receiving Hospital in Detroit, later serving as assistant to the late Dr. Charles F. Kuhn in Detroit, for six years. In 1932, he opened an office in Clawson where he remained until October, 1942, when he received his commission as Captain in the U. S. Army Medical Corps. He was stationed at Camp Pickett, Va., and Camp Kilmer, N. J., until March 25, 1943, when he was given a medical discharge from the Army. Doctor Osgood died July 21, 1943.

William P. Scott of Houghton was born in 1858 in Millersburg, Ohio, and was graduated from the Detroit Medical College in 1884. After graduation he became staff physician in St. Luke's Hospital where he remained for three years. He then became the division surgeon of the Michigan Central Railroad. He served in this capacity for three years, becoming physician at the Florence and Commonwealth mines in Florence, Wisconsin. He then began to practice



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in Houghton where he remained for half a century. Doctor Scott was elected an Emeritus Member of the Michigan State Medical Society in 1937. He was a charter member of the Houghton County Medical Society and served as dean of St. Joseph's Hospital for one year. He died July 1, 1943.

Charles A. Stimson of Eaton Rapids was born in 1867 in Eaton Rapids and was graduated from the University of Michigan Medical School in 1891. After taking a postgraduate course at Harvard University Medical School, he began his practice in Eaton Rapids, specializing in proctology. Doctor Stimson took postgraduate work at St. Marks, London, at St. Antoine, Paris, and at the University of Bern, Switzerland. Doctor Stimson was president of Eaton County Medical Society in 1932. He died May 25, 1943.

James F. Waltz of Capac was born September 28, 1885, in Capac and was graduated from the Detroit College of Medicine in 1907. He served as physician for the Quincy Mining Company in Hancock, Michigan for three years. In 1910 he located in Brown City, his practice being interrupted during World War I, when he served in the medical department of the Army at Camp Lee. After the war, he practiced in Capac. He served at one time as village president and was active in many civic organizations. He died June 25, 1943.

John T. Watkins of Detroit was born in 1883 in Whitmore Lake, Michigan and was graduated from the University of Michigan Medical School in 1906. He began his practice at Dollar Bay, coming to Detroit a year later. He was chief of the Department of Internal Medicine at Grace Hospital, consulting physician at Highland Park General Hospital and for many years director of the Heart and Lung Division of the Grace Hospital Medical Advisory Board, and visiting physician at the Detroit Tuberculosis Sanatorium. Doctor Watkins retired six years ago because of ill health. He died May 8, 1943.

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COUNTY AND PERSONAL ACTIVITIES

100 PER CENT CLUB FOR 1943

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Berrien County—R. C. Conybeare, M.D., Secy.
Branch County—James Bailey, M.D., Secretary
Cass County—K. C. Pierece, M.D., Secretary
Chippewa-Mackinac—David Littlejohn, M.D., Secy.
Clinton County—T.Y. Ho, M.D., Secretary
Dickinson-Iron—E. B. Anderson, M.D., Secy.
Eaton County—L. G. Sevener, M.D., Secretary
Gogebic County—F. L. S. Reynolds, M.D., Secy.
Grand Traverse-Leelanau-Benzie—Ben B. Bushong, M.D., Secretary
Gratiot-Isabella-Clare—R. L. Waggoner, M.D., Secretary.
Huron County—J. Bates Henderson, M.D., Secretary
Jackson County—H. W. Porter, M.D., Secy.
Lapeer County—H. M. Best, M.D., Secretary
Livingston County—Ray Duffy, M.D., Secretary
Luce County—Sidney Franklin, M.D., Secretary
Manistee County—C. L. Grant, M.D., Secretary
Mecosta-Osceola-Lake—John A. White, M.D., Secretary
Menominee County—Wm. S. Jones, M.D., Secy.
Midland County—H. H. Gay, M.D., Secretary
Muskegon County—Helen Barnard, M.D., Secy.
Newaygo County—W. H. Barnum, M.D., Secy.
Oceana County—W. Heard, M.D., Secretary
Ontonagon County—W. F. Strong, M.D., Secy.
Saginaw County—R. S. Ryan, M.D., Secretary
Sanilac County—E. W. Blanchard, M.D., Secy.
Shiawassee County—I. W. Greene, M.D., Secy.
St. Clair County—A. L. Callery, M.D., Secy.
St. Joseph County—R. J. Fortner, M.D., Secy.
Tuscola—R. R. Cook, M.D., Secretary
Wexford-Missaukee—B. A. Holm, M.D., Secy.

The above medical societies have certified 1943 dues for every member of their respective societies.

Congratulations, members of the 100 Per Cent Club!

John O. Wetzel, M.D., of Lansing is the author of an original article "Malingering Tests" which appeared in the American Journal of Ophthalmology, June, 1943.

Wesley H. Mast, M.D., of Petoskey has been named to the State Advisory Council of Health for a six-year term ending June 30, 1949, by Governor Harry F. Kelly.

* * *

The Michigan State Board of Registration in Medicine announced on June 30 its revocation of the medical license of Delbert R. Blender, M.D., of Chicago.

* * *

Keate T. McGunegle, M.D., of Sandusky was elected president of the Sanilac County Medical Society to take the place of Vida H. Gordon, M.D., who resigned in June.

* * *

The name of the Michigan Society for Crippled Children has been changed to "Michigan Society for Crippled Children and Disabled Adults," according to its secretary, Percy C. Angove, Detroit.

* * *

James L. Wilson, M.D., formerly of Children's Hospital in Detroit, has been appointed Chief of the Children's Medical Service at Bellevue Hospital and Professor of Pediatrics at New York University.

* * *

The Michigan Crippled Children's Commission again will conduct its consultation service for Doctors of Medicine in cases or suspected cases of poliomyelitis. For details, consult the Secretary of your county medical society.

* * *

Wilfrid Haughey, M.D., of Battle Creek, recently addressed the Battle Creek Torch Club on "The History and Accomplishments of Medicine."

V. M. Moore, M.D., Grand Rapids, was a recent speaker on the program of the Grand Rapids Torch Club on "The Modern Control and Treatment of Tuberculosis."

* * *

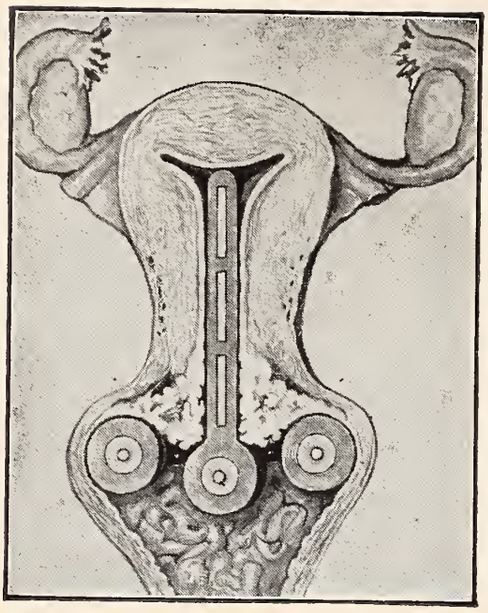
C. D. Hershey, M.D., Ann Arbor, is the author of an original article which appeared in the *Journal of the American Medical Association* of August 7 entitled "The Sacro-Iliac Joint and Pain of Sciatic Radiation."

Robert H. Trimby, M.D., is the author of an original article "Congenital Laryngeal Stridor: Lack of Relation to Thymic Diseases" which appeared in the *Journal of the American Medical Association* of July 10.

* * *

Leslie Coffin, M.D., of Painesdale, Michigan, was inducted into the presidency of the Upper Peninsula Medical Society at its 46th annual meeting in Iron Mountain, July 14. Nathan J. Frenn, M.D., of Bark River was chosen as president-elect. The 1944 meeting will

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be held in Houghton. R. J. McClure, M.D., as secretary of the Houghton-Baraga-Keweenaw County Medical Society will be secretary of the Upper Peninsula Medical Society during the ensuing year.

* * *

Roy D. McClure and Conrad R. Lam, M.D., are authors of an original article entitled "A Statistical Study of Minor Industrial Burns" which appeared in *Journal American Medical Association* of July 31.

William E. Abbott, M.D., and John Winslow Hirshfeld, M.D., Detroit, are authors of an original article which appeared in the same issue on "Problems of Hospital Organization Presented During the Detroit Race Riot."

* * *

The Wayne University County Hospital, which is to be built within the next year, has its first Board of Trustees. The personnel of this important body includes: J. Milton Robb, M.D., A. W. Lescohier, M.D., and Edgar H. Norris, M.D.; all of Detroit. In addition, Fred J. Gartner, Chairman of the Wayne County Board of Supervisors; Wendell W. Anderson, chairman of the University Medical Service Center finance committee; William A. Comstock and A. W. Groesbeck are on the board.

* * *

A Legal Medicine Conference and Seminar have been arranged by the Massachusetts Medico-Legal Society and the Department of Legal Medicine of Harvard Medical School for Wednesday, October 6, 1943. The all day Conference will be held at the Mallory Institute of Pathology, Boston City Hospital.

The Seminar will be offered during the entire week October 4 to 9. For further information contact Har-

POSTGRADUATE MEDICAL CONFERENCE

Rackham Building, Ann Arbor, Michigan

October 8, 1943

9:00 A.M.-5:00 P.M.

Diabetic Acidosis.
Diffuse Vascular Diseases.
Medical and Surgical Treatment of Hypertension.
Management of Chronic Sinus Disease.
Medical and Surgical Treatment of Peptic Ulcer.
Thymico-Lymphatic Constitution.
Endometriosis.
Low Back Pain.

A cordial invitation is extended to all physicians to attend this program.

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University Hospital
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vard Medical School. Courses for Graduates, 25 Shattuck Street, Boston, Massachusetts.

* * *

The Michigan Chapter, American College of Chest Physicians, will hold its annual meeting in the Statler Hotel, Detroit, Parlor F, on Thursday, September 23, beginning at 3:30 p.m. Dinner will be served at 6:30 p.m. W. B. Howes, M.D., Detroit, is in charge of arrangements.

PROGRAM

1. "Chest Problems in Selective Service"
   Lt. Col. Clarence I. Owen, M.C., Detroit
2. "Revaluation of the Rejected Draftees for Heart Disease"
   F. Janey Smith, M.D., Detroit
3. "A Study of Rejectees for Thoracic Abnormalities"
   William A. Hudson, M.D., and
   D. S. Brachman, M.D., Detroit

* * *

LET YOUR EDITOR KNOW

Inform the editor of your newspaper that you will be in Detroit for the 1943 Postgraduate Conference on War Medicine—the 78th Annual Session of the Michigan State Medical Society, September 22, 23, 24, 1943.

Bring your Michigan State Medical Society or American Medical Association membership card, to facilitate registration.

MICHIGAN MOTOR VEHICLE FINANCIAL RESPONSIBILITY ACT

This Act, as amended by the 1943 Legislature, became effective July 30 and affects everyone who owns or drives an automobile in Michigan, including non-residents.

The law requires the Secretary of State to suspend driver's license and revoke the owner's car registration after an accident involving bodily injury or after conviction for certain violations of the rules of the road. This includes any accident causing bodily injury or death regardless of who was at fault. Failure to report to the Secretary of State any accident causing bodily injury or death, or an unsatisfied judgment against the license-holder regardless of where the judgment was obtained, will cause suspension or revocation.

When the license is suspended, the car involved cannot be driven by anyone until the owner or operator has paid for all damages caused by such an accident and has given proof of his ability to pay for any damages he might cause in the future.

Proof that the operator or owner is able to pay for damages, when an accident has occurred, can be given by filing with the Secretary of State a copy of an insurance policy covering automobile liability.

* * *

1. *Does the Social Security Board take part in drafting social insurance legislation?*

Yes. Section 702 of Title VII of the Social Security Act defines the duties of the Social Security Board, in-

Applying Scientific Principles to a Good Idea

Scientific principles applied to the early automobile brought improvements resulting in a device that changed a way of life.

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It is a pleasant vanishing type cream that is clinically nonallergic and nonirritating, without odor. It is antipruritic, and has a background of excellent clinical acceptance.

It is especially recommended in the treatment of infantile eczema, seborrheic and eczematoid dermatitis, and the many forms of industrial dermatoses.



An unusual interest, resulting in many requests for literature and samples, may cause a slight delay, but these requests will be met in the order they're received.

(1) Diseases of Infancy and Childhood, L. Emmett Holt, Jr., M.D., and Rustin McIntosh, M.D., 11th Ed., p. 905, D. Appleton-Century Co., New York, 1940.

(2) Occupational Diseases, R. T. Johnson, M.D., p. 455, W. B. Sanders Company, Philadelphia, 1941.

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cluding "the duty of studying and making recommendations as to the most effective methods of providing economic security through social insurance."

2. *What are present proposals for compulsory health insurance?*

(a) Bills probably will be introduced in the 1943 state legislatures for state sickness benefits, to supplement state unemployment benefits. A law enacted in Rhode Island in April, 1942, provides weekly sickness benefits of from $6.75 to $18.00 to those wage earners eligible for unemployment compensation benefits. Employee pays payroll tax of 1 per cent.

(b) The Wagner-Murray bill (S. 1161) includes "cradle to the grave" provisions, including compulsory state medicine; the extension of the present Social Security Act to provide Federal disability (accident and sickness) and hospitalization benefits. A bill (H.R. 7534) by Representative Eliot of Massachusetts is now pending in Congress containing provisions for such an extension.

* * *

"The bureau system, which is in effect a government within the government is so completely out of harmony with American democratic principles that either it must be curbed or the fundamental concept of government of the people, by the people, and for the people will collapse."

—Governor Herbert B. Maw, *Utah*

* * *

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Wilensky, Thomas, M.D. ..... Lansing

Kent County

Burnett, Paul C. ..... Grand Rapids
Denham, Robert H. ..... Grand Rapids
Diskey, Donald ..... Grand Rapids
Laird, Robert ..... Grand Rapids
Martin, Alex ..... Grand Rapids

Shiawassee County

Lanting, Helen E. ..... Owosso
Merz, W. L. ..... Owosso

St. Joseph County

Robinson, A. L. ..... Sturgis

Wayne County

Arrington, Robyn J. ..... Detroit
Barron, William Harrold ..... Detroit
Comstock, S. G. ..... Wyandotte
Fraiberg, Paul L. ..... Detroit
Fullenwider, Allan C. ..... Detroit
Dolman, E. Nesbitt ..... Detroit
Gaffney, J. Mitchell ..... Detroit
Grillo, S. Philip ..... Belleville
Haefele, Leslie P. ..... Garden City
Holcomb, Clayton E. ..... Detroit
Hiller, Glenn I. ..... Detroit
Irvin, Earle Albert ..... Detroit
Janicki, Natalia ..... Eloise
Koch, John C. ..... Detroit
Lyons, William H. ..... Eloise
Margolis, Frederick J. ..... Detroit
Mitchell, Ralston S. ..... Detroit
O'Brien, L. Thomas ..... Detroit
Ohrt, Harold F. ..... Detroit
Parkinson, Doris ..... Detroit
Robinson, Fred L. ..... Dearborn
Slevin, John H. ..... Detroit
Stith, Dwight E. ..... Detroit
Swanson, Robert G. ..... Detroit

THE DOCTOR'S LIBRARY

Acknowledgment of all books received will be made in this column and this will be deemed by us as a full compensation of those sending them. A selection will be made for review, as expedient.

THE PRACTICE OF REFRACTION. By Sir Stewart Duke-Elder, M.A., D.Sc., Ph.D., M.D., Ch.B., F.R.C.S., Surgeon-Occulist to H. M. The King; Ophthalmic Surgeon and Lecturer in Ophthalmology, St. George's Hospital. Fourth Edition. With 183 Illustrations. Philadelphia: The Blakiston Company, 1943. Price $4.50.

The principles of the theory and practice of correcting the defects in the optical apparatus, is presented in a manner suitable for the use of students and practitioners of Ophthalmology. A simple form of presentation not too involved by mathematics or involved theory is adopted. Drawings and illustrations are used where they will add to the easy grasp of the subject. Sufficient explanation is given to give the student a good groundwork upon which to build by experience. The book is clinical and practical, and quite complete.

CONVULSIVE SEIZURES. How Deal With Them. By Tracy J. Putnam, M.D., Professor of Neurology and Neurosurgery, College of Physicians and Surgeons, Columbia University; Director of Services of Neurology and Neurosurgery, Neurological Institute of New York. 12 Illustrations. Philadelphia: J. B. Lippincott Company, 1943. Price $2.00.

Dr. Putnam has written largely for the patient and his family with the intent to give such information that seizures and other neurological manifestations may be partially understood, and proper treatment or control be provided in the absence of the neurologist. Simple descriptions and answers of the many questions asked by friends of the afflicted are a bulwark against terror and bewilderment. This book is not technical, but practical and useful. It should be in the hands of those charged with the daily care of these patients.

ALLERGY, ANAPHYLAXIS AND IMMUNOTHERAPY. Basic Principles and Practice. By Bret Ratner, M.D., Clinical Professor of Pediatrics, New York University College of Medicine; Visiting Pediatrician and Director of Pediatrics, Sea View Hospital; Associate attending, children's Medical Service, Bellevue Hospital; Consultant Pediatrician French Hospital. Baltimore: The Williams and Wilkins Company, 1943. Price $8.50.

Dr. Ratner has produced a Text on Serum Sickness, and its relations to allergy and immunology that is complete, and authoritative. The problems of immunology and allergy are linked in a way to answer many questions of great importance. The principles and practice governing the use of antisera, vaccines, toxoids, as well as blood transfusions, substitutes and replacements are minutely outlined. Sulfonamides and the allergic states are investigated in detail.

A major achievement is the balance of the varied information brought together in the book. It coördinates the findings of the anatomist, pathologist, chemist, bacteriologist, immunologist with the experiences of the medical and surgical practitioner, allergist, public health specialist, and military physician.

The reason supporting many of the methods of treatment are explained. Further experimentation is suggested.

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SKIN GRAFTING OF BURNS. Primary Care, Treatment, Repair. By James Barrett Brown, M.D., Lieut. Col. Med Corps, Army of the U. S.; Associate Professor of Surgery, Washington University, St. Louis, Mo., and Frank McDowell, M.D., Assistant in Clinical Surgery, Washington University, St. Louis, Mo. 131 Illustrations. Philadelphia: J. B. Lippincott Company, 1943. Price $5.00.

The technique of treatment of skin burns as practiced at Washington University is here made available to students and practitioners. Treatment of shock, early general care, restoration of blood volume by plasma or blood transfusion is the first consideration. Spontaneous healing, grafting of various kinds and their application, handling of contractures, flaps and dressings are discussed. Repairs of the extremities, head, neck are given with a chapter on final results. This is a handy, well-illustrated and valuable book and should be available for study whenever occasion requires.

CALENDAR FOR NURSES, 1943, 1944. New York: Macmillan Company, 1943.

This is a paper covered, free leaf appointment book with a space for each day of the year, May to April, with another corresponding space for notes. There are also notes on accelerated courses.

MEDICAL MALPRACTICE. By Louis J. Regan, M.D., LL.B., Member State Bar of California. St. Louis: The C. V. Mosby Company, 1943. Price $5.00.

Medical Malpractice is a subject always in the background and feared. To prevent such a catastrophy one should know about his duties, liabilities, relations and what constitutes malpractice. These are discussed, also evidence and proof, and malpractice prophylaxis. This is an interesting, readable book and contains a world of good suggestions. It is cloth bound on nongloss paper.

SYNOPSIS OF CLINICAL SYPHILIS. By James Kirby Howles, B.S., M.D., M.M.S., Professor of Dermatology and Syphilology, and Director of the Department, Louisiana State University School of Medicine. With 121 Text Illustrations and 2 Color Plates. St. Louis: The C. V. Mosby Company, 1943. Price $6.00.

This compact book of 671 pages gives an accurate picture of syphilis as contacted clinically. Diagnosis, prophylaxis and treatment are emphasized by observations on the responsibility of the physician in epidemiology of syphilis, syphilis in industry, and economic aspects of treatment. Pregnancy and transmission to the child are discussed. The latest knowledge is presented. This is a serviceable book.

REPORTS OF THE COUNCIL ON PHARMACY AND CHEMISTRY. Issued under the direction and supervision of the Council on Pharmacy and Chemistry of the American Medical Association. Pp. 207. Chicago: American Medical Association, 1943. Cloth. Price $1.00.

Through the years the size of this volume has grown with the increased work of the Council on Pharmacy and Chemistry until the present edition has the same number of pages as the book published in 1908, which covered the Council's first four years of activity. Some of the functions of this group are well known, but a more thorough understanding of the Council's scope may be gained from the annual reprint. This volume epitomizes that phase of the Council's work which may be said to be collateral to the "acceptance" of drugs—

the informative consideration of current medical problems in the interest of rational therapeutics. It contains reports of studies by private investigators which were originally published in *The Journal* under the sponsorship of the Council such as preliminary discussions of new developments in therapeutics and timely articles on the status of recognized agents as well as reports of omission or rejection of products from New and Nonofficial Remedies. It also offers a record of current decisions on matters of Council policy.

Several of the reports are of particular interest for various branches of medical science: the use of bulk ether in anesthesia, the absorption of surgical gut (catgut), the higher types of antipneumococcus rabbit serum, the surgical and medical treatment of animals with experimental hypertension and the status of racemic epinephrine solutions for oral administration. The reports in this small compact volume represent expert medical consensus and are proffered to aid in the consideration of the value of therapeutic agents.

NEW AND NONOFFICIAL REMEDIES, 1943, containing descriptions of the articles which stand accepted by the Council on Pharmacy and Chemistry of the American Medical Association on Jan. 1, 1943. Pp. 772. Chicago: American Medical Association, 1943. Cloth. Price, postpaid, $1.50.

The current volume of New and Nonofficial Remedies continues, with minor improvements, the convenient and informative system of classification adopted for the 1942 volume. The terminology of the official drugs has been revised to conform to the U.S.P. XII and the

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AND BONDS

N.F. VII. One notes that the valuable bibliographic index now appears on white instead of "India Tint" paper, a wartime necessity no doubt. This index appears before the general index which is now more properly placed at the end of the book. To one accustomed to the old format of New and Nonofficial Remedies the new arrangement appears at first somewhat awkward but with a little use the wisdom and convenience of the changes become more and more apparent.

Textual changes and revisions are numerous as in some previous editions. The chapter, Digitalis and Digitalis-like Principles and Preparations, has been extensively and somewhat radically revised to keep pace with the changing attitude toward this drug. It is understood that in this revision the Council had the aid of the foremost digitalis authorities, pharmacologists and clinicians alike. Other revisions have been made to keep the book up to date with medical knowledge.

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It will take 6 per cent from your pay envelope, up to $3,000, and another 6 per cent from the boss. From the self-employed—the doctor, farmer, merchant—it will take 7 per cent up to $3,000, or $210 a year.

Three-fourths of the money will be used to extend the benefits of social security, but one-fourth, or $3,000,000,000, will be turned over to the surgeon general, and he will be the absolute czar of American medicine, empowered to provide free medical and hospital care for 110,000,000 people.

He will control all hospitals and decide which ones can operate and how much they shall charge.

He will tell doctors where to practice and how many patients they may have and how much they may charge. He will also decide which ones may call themselves specialists.

(The bill generously permits each of us to choose his own doctor, but not if the one of our choice already has his allotted number of patients.)

Its purpose is to provide more social security, including medical care. And, as usual, it levies a tax—this time a whopper.

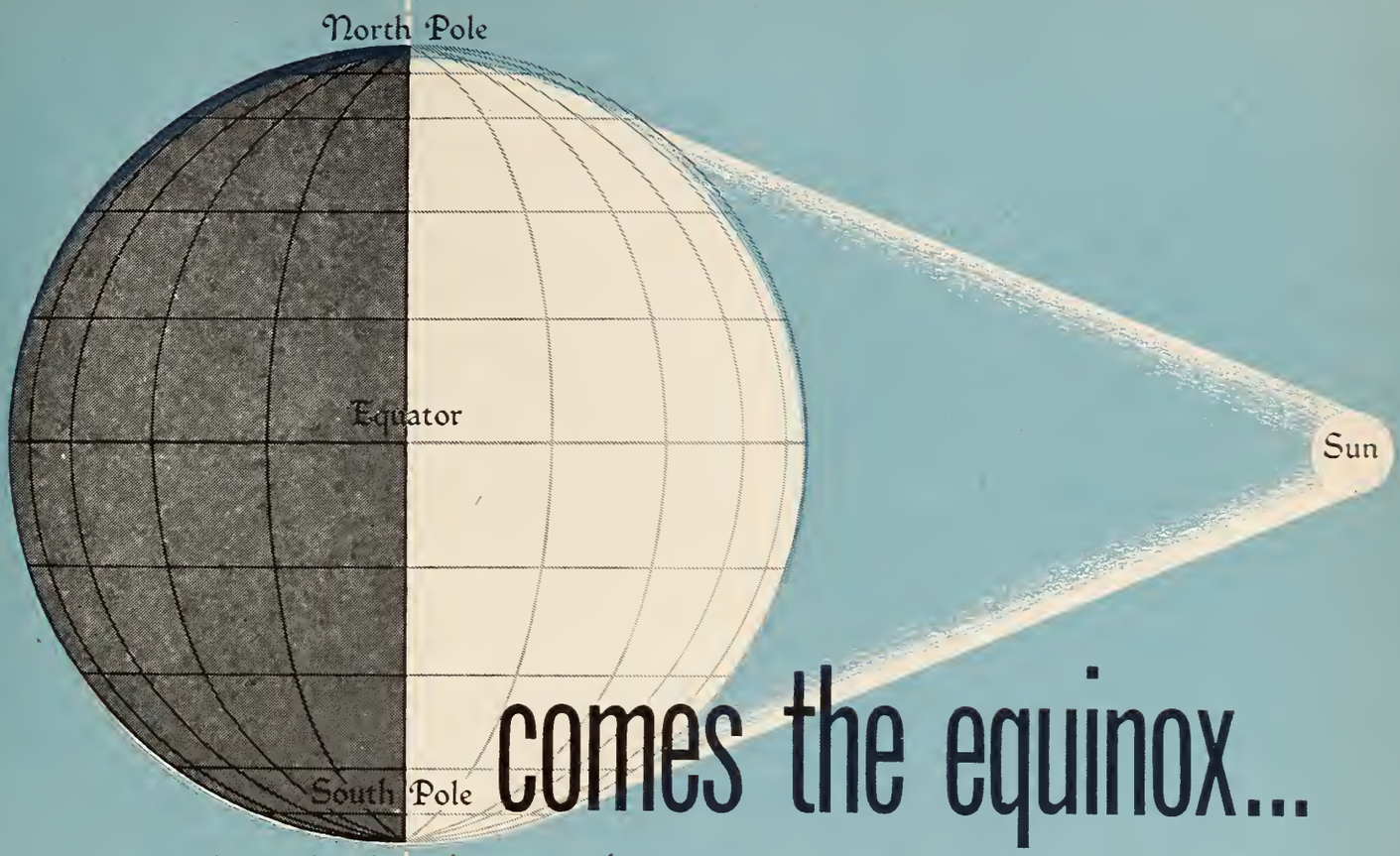
It will add $12,000,000,000 a year to our annual tax burden—twelve times the total cost of government when dad was a youngster.

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EDITORS COMMENT

UNCLE SAM, M.D.

Awaiting consideration by the present Congress is a bill of revolutionary social consequences and it calls for utmost scrutiny throughout the land as well as on Capitol Hill. It would enable the federalization of the study and practice of medicine, a radical departure from our tradition and the system under which the Nation has enjoyed the fruits of voluntary regulation, education and research free from political control and personal discretion in the choice of physicians and hospitals. And there are approved types of medical and hospital assurance for those who wish such protection.

Senator Robert F. Wagner of New York and Senator James E. Murray of Montana are the sponsors and after two readings it was referred to the Finance Committee. The bill is labeled with the general purpose of broadening the Social Security Act and it has the meritorious objective of bringing within its benefits certain classifications not now included. The definition given the proposal by the senators might catch one off guard with such purposes as "to alleviate the economic hazards of old age, premature death, disability, sickness, unemployment and dependency . . . to extend the coverage, and to protect and extend the social security rights of individuals in the military service," etc. But one goes on and finds this clause: "to establish a Federal system of medical and hospitalization benefits; to encourage and aid the advancement of knowledge and skill in the provision of health services and in the prevention of sickness, disability, and premature death."

Directed by the surgeon general of the United States would be a richly financed program controlling the practice of medicine and this could be extended to virtually complete coverage of the field; rules prescribed by him would determine the latitude of the public in the choice of doctors and hospitals; compensation to the profession might be on a fee, per capita or salary basis; maximum number of individuals served by each physician could be regulated or available patients distributed pro rata among available physicians.

The bill provides for a study and recommendations for the extension of this service to include "dental, nursing and other needed benefits," a report to be made not later than two years after enactment.

Subsidy and therefore virtual control of medical education would result, the bill authorizing the surgeon general "to administer grants-in-aid to nonprofit institutions engaged in research or in undergraduate or postgraduate medical education" and there is specific provision of funds for such purposes.

This is one of the more questionable aspects of the proposal. It is another of the attempts toward Federal control of education through "the back door."

Financing would come through a boost in social security taxes. Instead of one per cent as now, employes would pay six per cent on income up to $3,000 a year and employers would contribute six instead of four per cent. Under certain conditions, Federal, State and municipal employes would pay a tax of 3½ per cent. It is estimated this would increase the annual revenue to $12,000,000,000, a fourth of which would be credited to "the medical care and hospitalization account" to cover the costs of the new program. With such a sum, after $600,000,000 for administrative costs, there would be enough to pay each of the 120,000 physicians now available for civilian practice $5,000 each per year; to buy every available bed in every nongovernment owned hospital at $5 per day, 365 days per year; to pay $2.50 per day for each government owned hospital bed, 365 days per year; and have $181,565,887.50 left for drugs and medicines.

Under the bill there could be $48,000,000 available for medical education and research which is sufficient to meet the total operating costs of the country's 66 accredited medical colleges, subsidize the average of 22,000 medical students at $700 each per year with a residue of $11,108,752 for research.

Federalized medical education and research, practice and hospitalization smacks of something foreign to the way of life for which we are fighting.—*The Flint Journal,* August 15, 1943.

(Continued on Page 778)



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(Continued from Page 776)

THE LEGION HAS BEEN MISINFORMED

Doctors of Michigan were startled a few days ago by the publicity given a Michigan American Legion resolution to blacklist physicians who refused to comply with the government's proposed method of rendering maternity and child care to families of servicemen.

To clear the record let us repeat that the medical profession favors the granting of necessary funds directly to the wives of men in the armed forces, and has raised an objection only as to the method of payment. The misunderstanding is in regard to the *application* of federal monies allocated, and the Legion appears to be purposely misinformed and is perhaps being used as a cat's paw. Under the guise of a war measure, certain federal bureaucrats are attempting to Europeanize both service families and the medical profession.

Our profession yields to no one in its recognition of its obligations to the serviceman and his family. We feel that the wives of our soldiers and sailors should have a *direct and all inclusive* maternity benefit available to them to compensate for the sacrifices they and their husbands are making. If, then, it should ever happen that they are unable to meet their medical expenses there isn't a doctor in Michigan or elsewhere who would not render the necessary medical services without thought of recompense. Ours is a group that has rendered, is rendering, and will continue to render, service to all on both the war and home fronts.

With all due respect, the American Legion has no corner on patriotism.—Stanley W. Insley, in *Detroit Medical News*, August 30, 1943.

OBSTETRIC CARE FOR WIVES OF SERVICE MEN

The President has approved H.R. 2935, making appropriations for the Department of Labor, the Federal Security Agency and related independent agencies for the fiscal year 1944. This law appropriates $4,400,000 for grants to states, including Alaska, Hawaii, Puerto Rico, and the District of Columbia, "to provide, in addition to similar services otherwise available, medical, nursing, and hospital maternity and infant care for wives and infants of enlisted men in the armed forces of the United States, under allotments by the Secretary of Labor and plans developed and administered by state health agencies and approved by the Chief of the Children's Bureau."

As reported to the House, June 14, H.R. 2935 carried the following proviso to the title of the bill making appropriations for the Department of Labor:

"*Provided,* that no part of any appropriation contained in this title shall be used to promulgate or carry out any instruction, order, or regulation which discriminates between persons licensed under state law to practice obstetrics."

The Senate Committee on Appropriations, on June 24, recommended that the proviso be stricken from the bill. Thereafter, the Senate acquiesced in the recommendation of its committee and passed the bill June 29. A conference committee then considered the bill and agreed to recommend that the proviso be reinserted with the following additional phraseology:

"*Provided further,* that the foregoing proviso shall not be so construed as to prevent any patient from having the services of any practitioner of her own choice, paid for out of this fund, so long as state laws are complied with."

The conference report was considered in the Senate on July 2. There was no vote specifically on the recommendation of the conferees in connection with the proviso in question, but an effort was made to induce the Senate to reject the conference report because of that recommendation. The vote in the Senate was on the adoption of the conference report as a whole. Senator La Follette of Wisconsin, Senator Lodge of Massachusetts, Senator Chandler of Kentucky, Senator Hill of Alabama, Senator Maloney of Connecticut and Senator McClellan of Arkansas argued for the rejection of the conference report because of the recommendation it contained with respect to the proviso. Senator La Follette remarked, in part, as follows:

"Mr. President, I say that to yield on this matter is a step backward in modern practice of obstetrics, and it is unfair to the servicemen, who are preparing to give their lives for their country, if necessary, that their wives, who are pregnant, and who are to be delivered in their absence, shall not have the benefit of the finest standards and the finest care that money can procure.

"Yet in this false application of the so-called

(Continued on Page 780)

"Till He Comes Marching Home"





THE lonely lad sleeping in a foxhole remembers Mother as she was when he choked back the lump in his throat to kiss her goodbye for the last time. He does not realize that she may change, physically and psychically. To him she remains the same . . . always.

When he returns a great part of his dream can come true because THEELIN, an estrogen with a brilliant record of effectiveness, gives to many mothers in the climacterium continued relief from menopausal symptoms often intensified by the stress and worry of wartime living. Psychotic manifestations and somatic disturbances associated with ovarian hypofunction usually respond to the governing influence of this pure, crystalline estrogenic substance obtained from pregnancy urine. Its record of therapeutic usefulness and comparative freedom from undesirable side reactions has been proved by millions of doses and hundreds of published papers.

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(Continued from Page 778)

doctrine of states' rights such a situation will be created that the Congress will have done that very thing. So far as I am concerned, Mr. President, I want no part of it. I want no father of a child born while the father is overseas fighting for his country to point his finger at me and say, 'You are responsible for the death of my wife and child in my absence, because a man was permitted to minister to her at her time of need who was not properly equipped, who was not licensed to use drugs, who was not licensed to practice surgery.'

"Mr. President, I say such a thing would be an outrage."

After considerable discussion, the Senate voted to adopt the conference report by a vote of 42 to 32, with 22 Senators not voting. **Michigan's two Senators, Vandenberg and Ferguson, voted against the conference report with its objectionable amendment, and merit the thanks of the medical profession and particularly the people they tried to protect.**

As the bill was approved by the President, therefore, it contains the following proviso in the title relating to appropriations for the Department of Labor:

"*Provided,* that no part of any appropriation contained in this title shall be used to promulgate or carry out any instruction, order, or regulation relating to the care of obstetrical cases which discriminates between persons licensed under state law to practice obstetrics: *Provided further,* that the foregoing proviso shall not be so construed as to prevent any patient from having the services of any practitioner of her own choice, paid for out of this fund, so long as state laws are complied with."—*Wisconsin Medical Journal,* September, 1943.

MATERNITY AND INFANT CARE IN OHIO

An emergency maternity and infant care program for the wives and children of enlisted men of the armed forces, based on the rules and regulations laid down by the United States Children's Bureau, is now in effect in Ohio. * * *

It will be up to each physician to decide for himself whether he wishes to accept patients under the plan. * * *

The program does not have the endorsement of the Ohio State Medical Association which is on record as opposing it on the basis of principle and for specific reasons which were set forth in a Statement of Policy.

When the Scripps-Howard Newspapers decided to make this question a political issue, and an excuse to point the finger of criticism at the present state administration, obviously the Army Emergency Relief and Red Cross became jittery, as they cannot afford to be drawn into a political wrangle. When the pressure was put on at Washington to get them to take a hands-off policy, they politely had to state that they could carry on no activity which would in any way supplant the Children's Bureau proposal. When certain newspapers saw to it that little, if any, of the Association's side of the question reached the reading public, the attitude of the Association was not understood and false impressions were acquired by some citizens.

The Association re-learned a valuable lesson: The time to exert efforts to stop the spread of governmental medicine is while proposed legislation is pending and before the measure authorizing any proposal such as that of the Children's Bureau is enacted into law.

We believed then we could have arranged a program which would have produced much more satisfactory results than the proposal of the Children's Bureau. However, we have been prevented from following through with our sincere intentions because certain interests have seen fit to make this a political issue and because pressure has been exerted to keep certain voluntary agencies from negotiating with us on this matter.

We are convinced that the proper way to provide necessary financial aid to the families of servicemen for medical care is through stated cash grants, specifically for medical care and paid directly to such families by the government or voluntary agency assuming the responsibilities. That is the method which is being used to assist such families in obtaining other necessities. It is our intention to offer this recommendation for consideration by the Congress.

It has been intimated that the medical profession has been unpatriotic because it has disagreed with the Children's Bureau. The patriotism of the physicians of Ohio does not need to be defended. It is well known and is evidenced by contributions which physicians have made and are making to the war effort.—*Ohio State Medical Journal,* September, 1943.



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A corporation cannot practice dentistry and cannot, by employing licensed dentists, offer such services to the public or to its employes as part of the compensation and benefit of such employment, either for a fee or gratuitously.

The same principle applies to physicians, except when they perform emergency service in factories. Physicians cannot conduct the general practice of medicine in such first-aid departments.

This syllabus is based on the July 1, 1943, opinion of Michigan's Attorney General Herbert J. Rushton. The complete text of the Attorney General's opinion follows:

Does the State Dental Law permit employment by industrial establishments of full time or part time dentists for diagnostic or remedial service, and if so does it make any difference if such dental services are provided on a nonprofit basis to the corporation?

In answer to this question reference should be made to various provisions of the Dental Act, Act No. 122 of the Public Acts of 1939. Such pertinent provisions of the Act are as follows:

"Sec. 15. No corporation shall practice or continue to practice, offer or undertake to practice or hold itself out or continue to hold itself out, as practicing dentistry. Every person practicing dentistry as an employe of another shall cause his name to be conspicuously displayed and kept in a conspicuous place at the entrance of the place where such practice is conducted: Provided, however, That nothing herein contained shall prohibit a licensed dentist from practicing dentistry as the agent or employe of any charitable institution or hospital.

"Sec. 12. A person practices dentistry, within the meaning of this act, when it shall be shown:

"2. That he is a manager, proprietor, operator or conductor of a place where dental operations are performed; or

"3. That he performs dental operations of any kind gratuitously or for a fee, gift, compensation or reward, paid either to himself or to another person or agency; or ***"

"Section 14. The terms 'manager,' 'proprietor,' 'operator' or 'conductor' as used in this act shall be deemed to include any person:

"2. Who places in the possession of an operator, assistant or other agent such dental material or equipment as may be necessary for the management of a dental office on the basis of a lease or any other agreement for compensation for the use of such material, equipment or office; or

"3. Who retains the ownership or control of dental material, equipment or office and makes the same available in any manner for use by operators, assistants or other agents: Provided, however, That the above shall not apply to bona fide sales of dental material or equipment."

Section 18 provides several causes for the revocation or suspension of the license to practice dentistry. Subsections 5 and 6 of Section 18 read as follows:

"5. For conducting the practice of dentistry so as to permit directly or indirectly an unlicensed person to perform work which under this act can legally be done only by persons licensed to practice dentistry or oral hygiene in this state;

"6. For practicing dentistry under a corporate, assumed, trade or firm name in violation of the provisions of this act;"

Section 21 is also important for this section reads:

"Sec. 21. This act shall be deemed to be passed in the interests of the public health, safety and welfare of the people of the state and its provisions shall be liberally construed to carry out its object and purposes."

From the foregoing it is clear that there is no question but that a corporation cannot practice dentistry and that a corporation cannot by employing licensed dentists offer such services to the public. It follows that such corporation cannot offer such dental services to its employes as part of the compensation and benefits of such employment. Nor does it matter that such services may be given gratuitously by the corporation to the employes for the practice of dentistry is defined as including such gratuitous dental practice.

The restriction on dental practice also extends to the dentist himself for the proviso in Section 15 indicates that a dentist may be employed only by another dentist or a charitable institution or hospital for the purpose of performing dental services to the public. The purpose of this provision seems to be to maintain professional control of such dental practice in the hands of a

(Continued on Page 784)

In the "Chronic Fatigue" of Mild Depression



After employing Benzedrine Sulfate therapy in a series of 40 patients diagnosed as suffering from nervous exhaustion, Nathanson concludes:

"In approximately 80 percent of the patients there was a marked amelioration of this symptom (fatigue). Many of the patients had complained of fatigue for long periods and had tried various types of treatment without benefit . . .

"A sense of increased energy and capacity for work was noted in more than half of the cases. In addition a feeling of exhilaration and sense of well being was a consistent effect . . . Many patients volunteered that there had been a definite increase in mental activity and efficiency." Nathanson, M. H.—J. A. M. A., 108:528, 1937.

Benzedrine Sulfate Tablets

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Benzedrine Sulfate is primarily useful in depressions characterized by apathy and psychomotor retardation, but is contraindicated in patients manifesting anxiety, hyperexcitability, or restlessness.

The use of Benzedrine Sulfate by normals should not be permitted; it should always be administered under the careful supervision of a physician; and depressive psychopathic cases should be institutionalized.

In treating depressed patients with Benzedrine Sulfate, the physician should bear in mind that any drug which produces pleasant or euphoric effects may prove to be habit forming—especially in unstable or neurotic individuals.

SMITH, KLINE & FRENCH LABORATORIES
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FACTS DOCTORS SHOULD HAVE ON

THE ACTIONS OF WINE



Published by the Wine Advisory Board

AN entire generation of physicians lost touch with the medical lore of wine in the United States following the first World War. Actually, however, few other substances have been as widely recommended. This monograph, which summarizes the pertinent scientific literature in the interest that fact be separated from folklore by the application of impartial analysis, will prove of interest and value to specialists in many fields, and to the general practitioner as well.

A section on wine as a food is included. The actions of wine on the gastro-intestinal system, the cardio-vascular system, the genito-urinary system, the nervous system and the muscles, and the respiratory system are discussed. The uses of wine in diabetes mellitus, in acute infectious diseases and in treatment of the aged and convalescent are dealt with. There is a section on the value of wine as a vehicle for medication. Also an important section on the contraindications to the use of wine. Those who wish to pursue the subject further will find an extensive bibliography.

This review results from a study supported by the Wine Advisory Board, an agricultural industry administrative agency established under the California Marketing Act, and has been sponsored by the Society of Medical Friends of Wine.

Members of the medical profession are invited to write for this monograph. Requests should be made to the Wine Advisory Board, 85 Second Street, San Francisco.

CORPORATIONS CANNOT PRACTICE MEDICINE OR DENTISTRY

(Continued from Page 782)

licensed dentist. This principle is supported in the case of People vs. Carroll, 274 Michigan, Page 451, where the Court on page 456 says:

"It is a well known fact that in the profession of dentistry the services rendered are personal and call for knowledge in a high degree and that to separate this knowledge from the power of control is an evil, the correction of which was attempted by the instant legislation. The evils which arise from divorcing the 'power of control' from 'knowledge' apply with equal force to a partnership as well as a corporation."

It is obvious that where a corporation employs a dentist the control and responsibility for such dental practice would lie with the corporation and this is what the legislature apparently sought to avoid.

It is assumed that the question does not relate to an arrangement whereby the dentist is employed by the establishment to perform dental services for an employe in his own office where he has unlimited and full control, full and exclusive use, and management of such office and equipment. Such arrangement would not conflict with the provisions of the act.

Re the employment by a corporation of physicians in their first-aid departments: the same principle applies to physicians except that physicians in so performing medical services at factories perform emergency service. Physicians cannot conduct the general practice of medicine in such first-aid departments. The Medical Act provides for emergency treatment as an exception to the provisions of the Act. The Dental Act does not provide for emergency treatment as such exception for the reason that the legislature probably felt that there could be no emergency need for dental services.

Following World War I, the French records show that in German occupied France deaths from tuberculosis were 3.3 per 1,000 before the war. From 1916-17 they rose to 5.75 per 1,000. However, tuberculosis increased in all other countries during and after World War I, including the United States. The death rate was so alarming, especially in France and Germany, that the attention of our people was directed toward it, resulting in surveys and aid in various ways. C. M. Hendricks, Col. MCR, Diseases of the Chest Jour., May-June, 1943.

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equals

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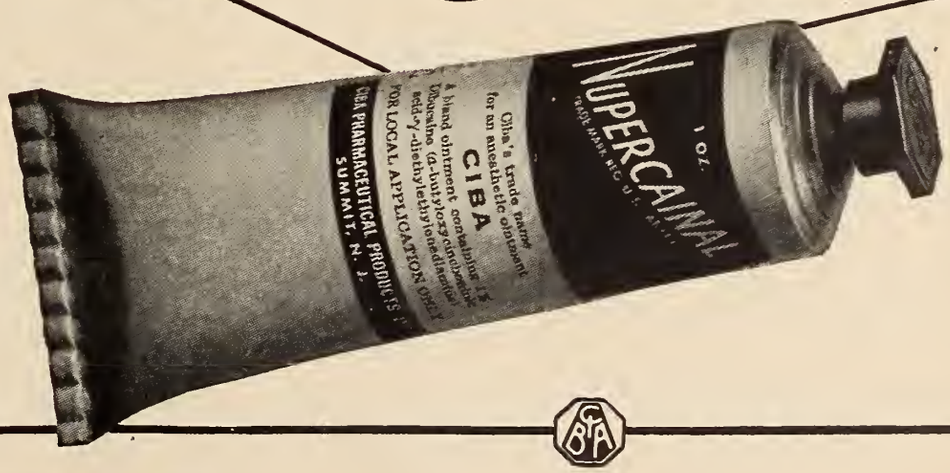
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UNDISTURBED HEALING

NUPERCAINAL is successfully used in traumatic as well as in surgical wounds. It prevents excessive evaporation of tissue fluid, provides prolonged anesthesia thus furnishing relief from pain and itching. Gauze does not adhere to the surface or edges of wounds. Painful dressings are eliminated.



One-ounce tubes
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*Trade Mark Reg. U. S. Pat. Off. Word "Nupercainal" identifies the product as containing "Nupercaine" (alpha-butylaxycinchoninic acid-gamma-diethylethylenediamide) in lanalin and petrolatum, an ointment of Ciba's manufacture.

CIBA *Pharmaceutical Products, Inc.*

SUMMIT, NEW JERSEY

WAR BULLETINS

NAVY DISCOVERS SERUM TO COMBAT INFLUENZA

A serum which, when vaporized and inhaled into the lungs, has successfully combated influenza and will make impossible a repetition of the disastrous 1918 epidemic, has been discovered by Navy research men under the direction of Commander Albert Paul Krueger (MC) USNR, John Moreland discloses in *Collier's Weekly,* August 27, 1943.

"We need no longer fear an influenza epidemic," says Moreland, who states that Commander Krueger "is the man chiefly responsible for the discovery" which "rivals such classics of medical research as the work of Koch and Pasteur."

The Navy is building up an enormous stockpile of the serum which established drug concerns, also may manufacture for sale to the general public.

Commander Krueger, head of Naval Laboratory Research Unit No. 1, and stationed at the University of California in Berkeley, was assigned in 1942 to study methods for the prevention and treatment of influenza. Complex and innumerable experiments followed before results were achieved.

As long as any of the serum, inhaled in mist form, remains in the lung tissues it neutralizes influenza virus breathed in by a patient and protects him against the disease, writes Moreland who adds:

"Animal experiments have proved this protection to be 90 per cent effective for immunization. Even after the disease has been contracted, experiments indicate, the new agent will cure 50 per cent of cases.

"So far, the human experiments have been conducted with an inhalation apparatus which consists of a cylinder containing the atomized serum, connected by rubber hoses to oxygen masks. A dozen men can be treated at one time by this method."

POSTWAR MEDICAL ECONOMICS

In the postwar period the physician will be confronted with two major functions. Enjoying, as he almost invariably does, the respect of his community, it will be his duty to utilize his understanding of human psychology to assume leadership in movements which set the pace for good government and citizenship. He will render a service to his country if through precept and example he will influence those with whom he associates to emulate a well-balanced philosophy of life.

The second function is a corollary to the first. It relates to his professional and economic safeguard through a policy of frankness and sincerity on the dangers of bureaucratic schemes applied to medical practice. From sources as variable as they are questionable, many a man on the street has heard so much about "free medical care" that he has accepted the idea as a promise on face value. Though he knows nothing about its implications he is willing to indulge in the delusion that some mysterious agency in the person of a rich uncle, will cheerfully and eagerly finance his medical bills. To counteract the medical-economic propaganda barrage which is now stirring the public mind the individual physician must in the interest of preserving the prevailing high standards of American Medicine accustom himself to discuss with his patients whenever the opportunity warrants it, the problems which medicine faces; and dispassionately interpret the advantages of the present methods over those promulgated by theorists and politicians.—Editorial, *Nebraska State Medical Journal,* July, 1943.

INDUCTION OF PHYSICIANS AND DENTISTS

1. Authority has been granted to waive the age limitations for induction in the cases of physicians and dentists between the ages of 38 and 44 inclusive, who are declared available for military service by the War Manpower Commission's Procurement and Assignment Service for Physicians, when such waivers are requested by a State Director of Selective Service.

2. When such a waiver is granted, letter will be written by this Headquarters to the State Director of Selective Service concerned, advising him of the fact that age limitation has been waived and that registrant may be forwarded for induction. Notices will be furnished State Directors in quintuplicate and, in order that identical distribution may be effected, one copy will be attached to each copy of the DSS Form 221 at such time as registrants are delivered for induction.

3. Registrants of this category will be included on induction reports and reports of rejections the same as in the case of all other registrants. The only deviation from normal procedure will be that this class of registrants will be listed by name on the reverse side of Daily Report of Inductions, with notation as to whether they were accepted or rejected.

By Command of Major General Aurand

MEDICAL EDUCATION FACILITIES FULLY MEETING WARTIME NEEDS

The Council on Medical Education and Hospitals, of the American Medical Association in its forty-third annual report published in the *Journal AMA,* August 14, says the number of doctors excellently trained, being graduated is the largest in history.

The report states that the accelerated medical education program and increased enrolments in medical schools "are now producing excellently trained medical graduates for military and civilian needs in numbers far exceeding the production of doctors at any time in the history of this country. . . ."

Not only are the medical schools of the nation prop-

(Continued on Page 788)

Winter's attacking armies fear—

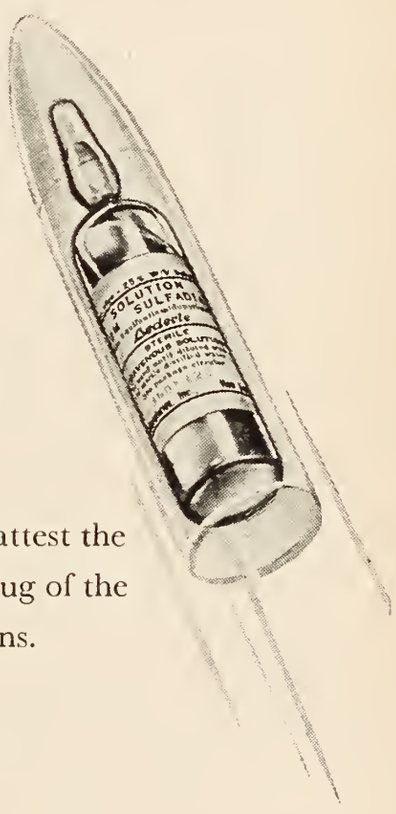
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Publications by the score attest the clinical value of this "Drug of the Year" for these infections.

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WAR BULLETINS

(Continued from Page 786)

erly handling the increased enrolments, but improvements in curriculum also are being inaugurated. "Practically all schools," the report says, "report that, while the basic medical curriculum remains essentially unchanged, subjects of war significance are being stressed or have been added. The most commonly mentioned subjects in this category are Tropical Medicine and Parasitology, First Aid, Shock and Blood Substitutes, Burns and War Wounds, Venereal Diseases, Aviation Physiology and Medicine, Industrial Medicine, Public Health, Chemical Warfare, Military Medicine and Chemotherapy.

"Two generalizations may be made from scanning this list: First, the subjects are not limited to clinical topics of a purely 'practical' nature but involve as well material of basic scientific importance. Second, many of these subjects will continue to be of great medical importance after the war, so that these wartime additions to the curriculum are not simply necessary educational concessions to an emergency but will probably continue to justify their inclusion in our educational programs after the war. . . ."

The increased demands on medical schools are being met by faculties seriously depleted by the numbers who have entered the armed forces. Up to July 1, 1943, the seventy-six medical schools and schools of basic medical sciences in the United States had contributed 5,637 faculty members to the armed forces.

"Acceleration in medical schools does not involve any basic change except the elimination of the long summer vacations. A significant increase in weekly work by the student is not required. The premedical programs, however, shorten the program mainly by a weekly increase in the quantity of work carried by the student. . . .

"Whether or not students will be able to carry this heavy load remains to be seen. These students will, however, be free from financial worries and the necessity for outside employment. They will receive medical care, and more attention will be paid to the students' physical condition.

"The results of this experiment in concentrated premedical education will be watched with interest by all who are concerned with the preprofessional education in every field, since it may offer a solution of the problem of reducing the long years of training required by the learned and scientific professions. . . ."

Postwar medical educational facilities are not being ignored. The *Journal AMA* says that "Recognizing that large numbers of physicians will be seeking advanced training immediately after the war, the Council on Medical Education and Hospitals is making a careful study of the educational facilities in the graduate and postgraduate fields. A preliminary survey has already been instituted to determine what institutions and agencies will be able to expand their regular educational activities to meet additional postwar needs. . . .The large number of physicians who return to civilian life will likewise find that the medical profession, the schools and the hospitals stand ready to meet the educational needs of the postwar period."

MENINGITIS DEATH RATE NOW LESS THAN 3.5 PER CENT

In a series of 1,518 cases of meningococcic meningitis and septicemia in the Army's Fourth Service Command during the winter and spring of 1942-1943, an early mortality rate of 8.8 per cent in 317 cases was lowered during February and March to 2.1 per cent in 761 cases, Colonel Henry M. Thomas, Jr., reports in *The Journal of the American Medical Association* for October 2.

Colonel Thomas says that this "amazing reduction in mortality from 39 per cent in the last war to less than 3.5 per cent in the present war is due entirely to chemotherapy (drug treatment). It is true that the most desperately ill patients may require additional therapeutic measures but for over 95 per cent of all patients chemotherapy properly administered is the only specific form of treatment necessary.

"Of the various sulfonamide compounds sulfadiazine has up to the present proved to be the most satisfactory in the treatment of meningococcic infections. It is more efficatious than sulfanilamide, and with one important exception it is much less toxic than sulfapyridine and sulfathiazole. . . . If all patients could be given a diagnosis and treated at the onset of the first symptom, it is my firm belief that the mortality would be reduced to zero. However, the disease is often masked by the absence of pathognomonic symptoms (on which a diagnosis can be made) and by the simultaneous occurrence of many infections of the upper respiratory tract presenting similar symptoms. This leads inevitably to loss of time in treatment in a few cases. In other cases the infection is so virulent that the patient dies before treatment can be given or before treatment has an opportunity to stem the tide of infection. . . ."

As for prevention, Colonel Thomas says that "the feasibility and effectiveness of large-scale prophylactic use of sulfadiazine in the reduction of carriers and the prevention of cases are being demonstrated. It has been possible then to compensate by improved methods of treatment and prophylaxis for the rapid training program which necessitated fatigue, exposure and crowding of unseasoned troops. It seems safe to prophesy that in succeeding years the case rate can be greatly reduced by prompt prophylactic treatment at suitable points, particularly among unseasoned troops. It seems equally safe to prophesy that the mortality from the cases that do develop will be held to low levels, although the occasional cases of fulminating disease probably will continue to produce a small number of deaths."

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The Skin in Endocrinology*

By Carleton J. Marinus, M.D., M.Sc.
Detroit, Michigan



M.D., 1921, University of Michigan, Assistant Professor of Clinical Medicine, Wayne University.

A discussion of common skin disorders from the viewpoint of the Endocrinologist. Alopecia areata temporarily benefited by thyroid treatment. No permanent benefit. Improvement in the quality of the hair in myxedema with appropriate treatment. No benefit from endocrine therapy in the common vertex type of baldness. Mechanism of male type of hair growth in males and females is discussed. Stimulation of male hair by androgenic therapy. No effective therapy for excess or abnormal hair growth in women unless associated with ovarian tumor. Treatment then surgical. Acne vulgaris due to excess androgenic as compared with estrogenic hormones. Suggestions for treatment. Senile atrophy of the skin and Androgens. A certain group of cases of eczema associated with relative excessive pituitary function as compared to ovarian function.

■ The modern dermatologist is interested in the etiology of the lesions coming to his attention. Many times he suspects that there may be a glandular disturbance responsible for the pathology before his eyes. This idea has been fostered by numerous reports in the literature indicating that certain skin lesions respond to endocrine therapy. If one attempts to guide his treatment by the procedures advised he is frequently, if not usually, disappointed by the results obtained. Out of the confusion in the literature and out of my own observations covering fifteen years of endocrine practice, I hope to outline certain basic conceptions and clarify to some extent the possibilities of endocrine therapy in dermatology.

*Read at the seventy-seventh annual meeting of the Michigan State Medical Society, Grand Rapids, September 25, 1942.

For purposes of simplification, we might consider in turn, disorders of the appendages, the hair and nails, disorders of vascular supply, and disorders of the skin itself.

The mechanisms controlling hair growth are unknown. It is felt that hair growth is, in part at least, controlled by a hormone or hormones produced by some gland of internal secretion. What this hormone is or where it is produced, we do not know. We see luxurious hair growth before the onset of puberty and after sex activity is past. During the period of sex life there is a difference in hair growth, both in quality and distribution. This would indicate that the sex glands play a part in the nutrition of the hair follicles.

Failure of hair growth, alopecia, is frequently ascribed to endocrine deficiency. Results of treatment are disappointing. In alopecia areata there is frequently a re-growth of hair in the bald spots following the administration of thyroid extract. If treatment is continued the condition recurs; new bald spots appear which are not improved by changing the thyroid dosage. We must conclude that the effect of thyroid in these cases is nonspecific and that the alopecia is not the direct result of thyroid deficiency. Complete alopecia is not affected by thyroid in any dosage.

Thinning of the outer third of the eyebrows is quoted as a diagnostic sign of thyroid deficiency. The administration of thyroid does not result in the reëstablishing of hair in these areas. In true myxedema, on the other hand, one sees a characteristic disturbance in hair growth in that all of the hair is lifeless, brittle, dull in color, and falls out easily. With the administration of thyroid there may be a complete loss of all the old hair followed by the development of a new crop which is luxurious, deeper in color, elastic, and strong.

If, however, the case is of long standing before treatment is initiated, one may find that the hair follicles are atrophic and do not regain their function.

By far the most common types of hair loss is the vertex baldness seen in males and apparently of hereditary origin. This appears most commonly at forty but may occur very early in life and is limited to the scalp. The pubic, body, axillary hair, and beard are normal or may be unusually luxuriant. This same type of baldness occasionally appears in women. I have never seen improvement in this type of baldness by any form of endocrine therapy, including the pituitary therapy so strongly advocated a few years ago.

With failure of development of the sex glands in the male, there is a failure of development of hair in the masculine distribution, beard, chest, pubic area, et cetera. Growth of hair in these areas may be stimulated by activation of the quiescent sex gland by gonadotrophic therapy, or by direct administration of the male sex hormone. Loss of the male sex hormone by castration or disease results in gradual diminution of hair growth in the masculine areas. This can be reactivated by administration of the appropriate hormone.

One of the problems of the dermatologist is the appearance of hair growth in the masculine distribution in women. Extreme examples are seen in cases of tumor of the suprarenal, pituitary, and ovary. Ablation of the tumor results in gradual disappearance of the abnormal hair. Because of these observations it has been postulated that milder degrees of abnormal hair growth are due to disorder in one of these three glands. Administration of glandular extracts is singularly ineffective in treating these cases.

How can one correlate the observations which I have sketchily outlined above into a simple, clear concept which would be of value in determining treatment? First, the thyroid hormone is necessary for the normal function of the hair follicles just as it is necessary for the normal function of all the other cells of the body. In the presence of a marked thyroid deficiency there is definite impairment of the nutrition of the hair follicles resulting in colorless, lifeless, brittle hair. This is generalized and affects equally the hair follicles throughout the body. The presence of such generalized disturbance in hair growth would indicate the advisability of a metabolism test and the response to adequate thyroid treatment will be good. Local disturbances in follicular activity, such as in alopecia areata or typical baldness, cannot be due to thyroid deficiency and do not respond to treatment.

Hair growth in the masculine areas requires the presence of the male sex hormone. Certain quantities of this hormone are present in females as well as males. When the quantity of the male hormone is deficient in the male there is a lack of hair growth in the masculine areas, in the presence of normal growth on the scalp. Growth of hair in the masculine areas may be stimulated by appropriate therapy.

When hair growth is seen in the masculine areas in women, the problem is more complex. We are dealing here with a lack of balance between the male and female hormones with a relative or absolute excess of the male hormone. The excess production of male hormone in the female results in a general masculization. There is amenorrhea, loss of the feminine type of fat, change in muscle contour approaching the male type, change in voice, change in personality, as well as change in the hair distribution. The abnormal hair growth is luxuriant and progressively increases in quantity. This picture should inevitably suggest new growth which may be found in the ovary, the suprarenal or the pituitary gland. It is required that the tumor be located and removed because of the possibility of malignancy. Early diagnosis may be life-saving. Complete removal of the offending tissue restores the patient to her previous normal.

The majority of cases of excess hair growth in the masculine areas in women are due to a relative deficiency of the female hormone without excess production of the male. In these cases, one may see minor disturbances in menstruation and other evidences of deficient ovarian activity. One would expect that the adequate administration of female hormone would correct the imbalance, normalize menstruation, and control the abnormal hair growth. I have followed this line of treatment in a large group of cases with the following results. When theelin is administered in sufficient quantities to bring about a therapeutic result the patient's production of theelin is interfered with, the cyclic character of the menstruation is altered, and the patient's general condition is impaired. Persistent treatment does result in decreased vitality of the abnormal hair, reaching a point where the hair can be broken off

at skin level by simple rubbing and its rate of growth so slowed that it is no longer apparent. Promptly upon the cessation of treatment the hair growth starts in again and may be even more luxuriant than before treatment was started.

The mechanism of this result is as follows: with the administration of therapeutic doses of theelin the gonadotrophic activity of the pituitary gland is inhibited and the ovaries go into a resting stage in which there is no activity. The endometrium no longer undergoes the cyclic changes. When treatment is suspended the pituitary regains its gonadotrophic function and ovarian activity and the resultant endometrial changes return. The level of the gonadotrophic activity may not reach the level that was present before therapy. I believe this program of treatment to be definitely harmful and definitely contra-indicated.

An alternate method of treatment is an attempt to increase ovarian activity and thereby increase the production of female hormone by gonadotrophic therapy. There are a number of gonadotrophic materials on the market. Some are derived directly from the pituitary gland; others are obtained from the urine of pregnant women. During the adolescent period the urinary gonadotropins, of which Antuitrin S. is an example, are effective in stimulating ovarian development, resulting in increased ovarian activity. After the adolescent period, the response of the ovaries to this type of stimulation is strikingly decreased.

I have a large series of adult cases in which Antuitrin S. was given in large dosages over a prolonged period of time. In the majority of cases there has been no satisfactory evidence of increased ovarian activity either in the character or rhythm of menstruation or in the abnormal hair growth. There is an occasional case in which relatively small quantities of Antuitrin S., given shortly before the expected time of ovulation, have resulted in normalization of the menstrual cycle. In these cases, the amount of abnormal hair growth has not increased and the pigmentation and stiffness of the hair has decreased. In no case has the abnormal hair growth entirely disappeared.

The gonadotrophic hormone derived from the anterior lobe of the pituitary itself would theoretically be more appropriate in these cases. This hormone is either a protein, or so closely linked to a protein, that these materials have a strong antigenic activity. The use of these materials hypodermically frequently results in severe local reactions and may produce a generalized anaphylaxis. Their use is not without danger. It is often impossible to continue treatment long enough to produce the desired therapeutic result.

As a result of these experiences, I have reached the following conclusions: When an adult patient presents herself with abnormal hair growth as the major symptom, without other important disturbances in function, I do not treat her with the glandular products. When the patient's major complaints indicate the need for endocrine therapy, I will accept her for treatment and will expect to see some improvement in the abnormal hair growth, but do not expect restoration to normal.

The endocrinologist frequently sees alterations in the nails of his endocrine patients. Brittleness, flaking, longitudinal and transverse ridging are common complaints. Transverse ridges are indicative of temporary nutritional changes and cannot be due to a chronic metabolic disturbance. Longitudinal ridges are seen in numerous conditions; thyroid deficiency, nutritional disorders, and vitamin deficiencies. These symptoms are nonspecific and indicative of chronic disturbance in cellular nutrition. In severe deficiency of the anterior lobe of the pituitary, such as is seen in pituitary dwarfism, Simmond's Disease, et cetera, the nails are smooth, thin, and hyper-flexible. In thyroid deficiency, the nail is thick, grows slowly and is brittle. It may or may not be ridged. In recent years we have seen excessive flaking or splitting of the nails. This is not an endocrine disorder, but is the direct result of the use of paint and its appropriate solvents upon the nails.

Vascular disturbances of the skin are extremely common in endocrinology. The most common, of course, are the hot flashes associated with the natural or artificial menopause. These are amenable to estrogenic therapy, using either the natural hormone or the synthetic Diethylstilbestrol. In nearly every case of hot flashes we find an opposite reaction; namely, vaso-constriction, involving usually the extremities. The vaso-constriction also responds to estrogenic therapy. In these cases the problem of impairment of the patient's own theelin production is unimportant as the patient is rapidly approaching the time when her own ovarian activity will spontaneously cease.

One frequently finds in younger women a syn-

drome of vascular instability identical with, but less severe than, that observed at the menopause. In these cases the phase of the vaso-constriction may be more disturbing than the vaso-dilatation. The vaso-constriction may be so great as to result in trophic disorders in the skin, nails, or joints of the hands, even approaching a true Reynaud's Disease. In most of these cases one will find other evidences of impaired gonadal activity such as eunuchoid body proportions, unstable emotional reactions, et cetera. If the case is recognized before the age of twenty or twenty-five, ovarian activity may be increased by appropriate gonadotrophic therapy, resulting in a true cure. If the ovaries do not respond to this stimulation, the symptoms may be kept in control by the use of the crude ovarian extracts. It is rarely necessary to use theelin and, if used at all, the dose should be small, 1,000 to 2,000 units, two or three times a month.

Trophic disorders in the skin may result from long-continued, severe endocrine disturbances. The skin of thyroid deficiency has been described as dry and scurfy. The classic example is the thick, dry skin of the cretin. This type of skin is seen only in severe thyroid deficiency of long standing. There is an actual atrophy of the sweat glands and the sebaceous glands, and occasionally of the hair follicles. The skin itself is thickened because of deposits of mucin. There is a curious translucence giving the "alabaster" quality. This skin is to be differentiated from other dystrophic disturbances such as congenital ectodermic defect, ichthyosis, and in adults, the skin associated with leukemia, et cetera. Under thyoid treatment, the skin becomes thinner, soft and pliable, but the atrophied structures are not replaced.

The skin undergoes a change during sexual maturing with the production of an increased amount of sebaceous material. This is apparently due to the male hormone rather than to the female hormone. If sexual maturing is delayed as in pituitary deficiency the adolescent skin will retain the characteristics of pre-adult state. If sexual maturing is induced by adequate gonadotrophic therapy, the activity of the sebaceous glands is increased.

In the adult eunuch this characteristic increased sebaceous activity can be produced at will by the administration of the male hormone. The administration of the female hormone does not result in increased sebaceous activity. In these respects, those skin conditions associated with excessive activity of the sebaceous glands will be considered as in the same classification as, and due to the same mechanism, as are increases in hair growth in the masculine areas. Clinically, it is very common to see abnormal hair growth associated with overactivity of the sebaceous glands.

The basic mechanism underlying acne vulgaris, whether appearing at puberty or later in life, is therefore intimately associated with the male sex hormone and its quantitative relationship to the female sex hormone. Severe acne in the adolescent male is usually associated with unusually rapid sexual maturing. It is therefore self-limited, but during the period of its activity may be sufficiently severe to produce permanent scarring. I do not believe it should be treated by the endocrinologist because I can see no logical reason for decreasing sex function to give a better complexion. Local therapy is certainly indicated.

In the female, excessive acne indicates no real excess of the male hormone but a relative deficiency of the female hormone. This indicates glandular imbalance. If the menstrual periods are regular and of normal quantity and duration, it is probable that the imbalance is temporary and will correct itself. In these cases therapy should be local until time demonstrates that the disturbance is not self-limited.

If the menstrual periods are abnormal, and particularly if the body proportions are those of eunuchoidism—relatively long extremities, poorly developed breasts, or obesity—the case should have endocrine therapy. In this group, as in the cases of abnormal hair growth, the most spectacular results are obtained by the use of theelin. This type of therapy is of but temporary benefit and may impair the already poor pituitary function. In my opinion, ovarian therapy is distinctly contra-indicated in this group.

Gonadotrophic therapy has been advised in acne since the report of Lawrence about five years ago. The results of treatment have been reported as varying from about 90 per cent cures to about 90 per cent failure. This wide discrepancy in results is difficult to interpret.

The earlier reports covered the use of urinary gonadotropins such as Antuitrin S. This material has a distinct value in stimulating ovarian maturation if given during the adolescent period. It is rarely effective in the adult. It has no direct effect upon the acne. One criterion of adequate

dosage is the establishment of a normal cyclic menstruation. If this result is obtained, there will be a corresponding improvement in the acne. If normal menstruation is not obtained, the acne will not be benefited.

At the present time we have available a gonadotrophic material consisting of the gonadotrophic hormone derived from the anterior lobe of the pituitary fortified by the addition of urinary gonadotropin. This is marketed under the name of Synapoidin, Parke, Davis & Co. My number of cases treated with this material is relatively small but it seems to be more effective than the older materials. Here again, the criterion of successful treatment is the establishment of normal menstruation. When this is accomplished, the acne progressively improves. If menstruation again becomes abnormal, the acne will be worse. With continued normal menstruation one can be assured that the acne will eventually clear up. There should be sufficient local therapy to prevent scarring.

With advancing age and the appearance of general senility one frequently sees trophic changes in the skin. Such trophic changes are occasionally seen in younger individuals with other senile manifestations. Recent observations on the administration of male hormone for the relief of the functional disturbances associated with the male climacteric and milder degrees of prostatism, indicate an improvement in the skin following its use. The skin becomes thicker, less dry and wrinkled, and there is a definite relief of "winter pruritus." Small amounts of male hormone may be used with advantage, therefore, in the thin, dry, itchy skin seen in elderly people whether male or female. This may be applied as an ointment or as the methyl ester of the hormone by mouth. The quantity needed is small and the results are extremely gratifying to the patient.

I wish to mention briefly two rare disturbances in the skin which seem to have an endocrine basis. A recent report states that the lesions of pemphigus can be caused to regress or recur by the administration or withholding of that fraction of suprarenal cortex which controls salt metabolism.

I have seen three cases of scleroderma in which the long continued administration of crude anterior lobe pituitary has resulted in regression of the skin defect and eventual restoration to normal.

Finally, we come to eczema. I wish to state categorically that I do not consider eczema to be an endocrine disease. There are certain types of patients, however, in whom an endocrine imbalance is a factor in the eczema. I think most dermatologists will agree that eczema is the expression of various interacting factors and that there may be several disorders included in the single classification. Thus, in infantile eczema the factor of allergic sensitization to one or more foods seems to be the outstanding etiology. One may see in older individuals the development of an eczematous state following exposure to simple irritants, to proven allergens, or to injudicious local medication. In these cases the removal of the offending food or local allergen may be sufficient to bring about a cure.

In the majority of cases of eczema, the problem is not so simple. If one studies, from an endocrine standpoint, a group of patients suffering from eczema he finds one type which occurs with sufficient frequency to have apparent significance. These are girls in the adolescent or early adult age period who show a rather masculine type of body build with coarse features, prominent lower jaw, and bulky, boney framework. The facial bones are suggestive of the acromegalic type. These patients are physically active and have good endurance. They are mentally above the average. They present a complex problem from the emotional standpoint. There is a definite feeling of inferiority which the patient frequently ascribes to her unattractive skin. They are inclined to be timid and retiring, frequently depressed, but unable to express their feelings.

In these cases the menstrual periods are usually somewhat late in appearing, tend to be delayed or irregular, are frequently painful, and may be either profuse or scant. To make it more confusing, in some of these girls the menstrual periods are perfectly normal.

There is usually a definite instability of the vasomotor system with excessive flushing on emotion, reddening of the chest, blotchiness of the skin generally, and cold extremities. There is often a seborrhoic disturbance involving the face, chest, and scalp. There is frequently a complaint of mal-odorous perspiration.

From the endocrine standpoint these cases would be diagnosed as representing a dysfunction of the pituitary with excessive production of the growth hormone and a deficiency of the gonado-

trophic hormones. The dermatologic history in these cases may go back to infancy, at a time when the endocrine diagnosis could not be made. It is more common to find, however, that the eczema began or became more severe with the onset of adolescent changes at the age of ten or twelve. There are certain features regarding the eczema which suggest its endocrine basis. There is very commonly a marked exacerbation of the eczema under two conditions; first, during the week or ten days before each menstrual period and second, explosions of increased exzematous activity during and following emotional stress. In a large proportion of these cases one can also find an allergic factor in foods so that the ingestion of certain foods will precipitate an exacerbation of the eczema.

Animal research has demonstrated a definite antagonism between the growth hormone and the gonadotrophic hormones of the pituitary. It would therefore seem logical to treat these cases with gonadotrophic materials. Unfortunately, this line of attack is unsatisfactory as the majority of these cases prove hyper-sensitive to the extracts, developing large, red, hot swellings at the points of injection. If treatment is continued in spite of local reactions no benefit is derived.

If one treats these cases with the older crude ovarian products, one obtains very satisfactory results. The pre-menstrual exacerbation can be prevented completely if the dosage is adequate. There is a definite stabilization of the emotional reactions as a whole so that the patient is less likely to develop an eczematous flare-up as the result of emotional experiences. There is even a decrease in the allergic response of the skin to the specific food substances to which the patient may be sensitive.

In the majority of the cases, fifteen to thirty grains of a potent desiccated whole ovarian preparation given daily in divided doses after meals will be adequate to maintain control except under unusual circumstances. In the more severe cases it may be necessary to use whole ovarian substance, one or two c.c. subcutaneously, two or three times a week during the pre-menstrual phase. Occasionally, I may need to use theelin, two thousand units subcutaneously, two or three times during the inter-menstrual cycle.

In order to demonstrate that these results were not psycho-therapy, I have repeatedly substituted capsules of beef muscle, which have an identical appearance, for the ovarian capsules. In each instance there has been a prompt recurrence of the eczema. I frankly admit that I always advise concurrent local therapy in the beginning to expedite control. In the case that is to respond, I know that endocrine treatment and avoidance of the allergenic foods will result in relief, but only after a period of time. With local therapy the results are much more prompt.

This form of treatment is not curative in the sense that it decreases the patient's primary endocrine imbalance. It is purely substitution and must be continued until the patient has passed the need for it. It does afford a means of controlling the chronic eczemas which fall into this classification. I should emphasize that this program has not been successful in the treatment of girls with slender bones, strikingly feminine features, et cetra, who do not present the endocrine picture described above. One should not consider, therefore, that all cases of eczema should be treated with ovarian therapy.

I have presented several dermatologic conditions which I have successfully treated as an endocrinologist. How would one approach a dermatologic problem from the endocrine standpoint? The case should be studied as an endocrine case. Complete history, including a family history of possible endocrine disturbances, is the first step. A series of measurements to determine body proportions and possible deviations from normal relationship is the next step. Finally, laboratory work including metabolism tests and x-rays of the sella turcica and of the epiphyses. Quantitative determinations of the hormones in the blood and urine will eventually prove of great value but have not at present reached a point of certainty in making a diagnosis. Finally, the use of a therapeutic test with control of the positive results by the use of inert placebos will confirm the diagnosis.

Case 1.—Mrs. C., aged fifty-three. Myxedema for duration of fifteen years. Basal metabolic rate—42 per cent. Hair scant, thin, brittle, dull gray, of normal distribution. Following the administration of thyroid extract, grains V daily (gradual increase in dosage over a period of three months), there was a loss of all the hair on the body and scalp. Immediately following this a new crop of hair of normal distribution appeared. The new hair grew rapidly, was coal black in color, glossy, elastic, and somewhat coarse. During a period of several years of continued treatment the

hair gradually turned gray and finally nearly white but still maintains its good texture.

Case 2.—Mr. H. Eunuch, aged twenty-five. This patient did not develop sexually because of a severe pseudo-Froelich syndrome at puberty. When seen at twenty-five he had lost the abnormal obesity but was fatigued, emotionally unstable and suffered from vertex headaches. The genitalia were the size of an eight-year-old boy's. There was no pubic, axillary, or body hair. He had never shaved. The scalp hair was abundant, fine, and elastic. One-thousand units of Antuitrin S. were given subcutaneously three times weekly for six months. At this time the testicles were three-quarter inches in the longest diameter and definite epidydimi were palpable. The penis measured two and one-half inches when flaccid and four and one-quarter inches when erect. There was abundant, fine lanugo over the body and some axillary hair. It was necessary to shave twice weekly. At this point testosterone, twenty-five milligrams subcutaneously twice weekly, was started. There was continued growth of the penis and the beard required shaving daily.

Case 3.—Miss O., aged thirty-five. Cushing's syndrome. Amenorrhea of three years' duration, gain of 30 pounds in weight, deepening of the voice. This girl shaved twice weekly, there was complete absence of hair on the vertex, with coarse black hair on the rest of the scalp. There was marked excess hair on the legs and arms. The pubic hair was strikingly triangular in distribution. Various kinds of glandular therapy were given without success.

Case 4.—Mrs. M., aged twenty-five. Functional hypogonadism. Acne and excessive hair growth. Acne began at puberty; excessive hair growth during the past five years. Periods irregular, patient fatigued, hyper-emotional, eunuchoid body proportions. Antuitrin S., 750 units two weeks before period due. When the injection is taken period comes on time, there is no acne, and symptoms are relieved. When the injection is omitted or a placebo substituted the period is late and the acne occurs as severely as if no therapy had ever been used. During a year on this program the facial hair growth has become lighter in color and the individual hairs finer. The hair grows just as rapidly but no new hair has developed.

Case 5.—Miss L., aged fourteen. Eczema began at the elbows and knees at the age of six years. Marked increase involving the face and neck at twelve. Increase in severity one week before each period but never entirely clear. Menses began at twelve, five week intervals, profuse. Extreme dermatographia, masculine features, malocclusion treated with dental bands. With ovarian substance by mouth the pre-menstrual exacerbation controlled. Hypodermic ovarian substance required during emotional stress, at examination time, et cetera. While on this program no eczema occurred except after indulgence in foods to which the patient is sensitive. Treatment discontinued after six years with no recurrence.

The Place of Hormone Assays in Clinical Medicine*

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Various hormone assays being used in clinical medicine are discussed and certain claims concerning their usefulness in differential diagnosis are evaluated. Quantitative determinations of urinary chorionic gonadotropin (modified Aschheim-Zondek test) are useful in detecting the presence of an hydatid mole or chorioepithelioma and are of prognostic value in cases of testicular teratoma. Tests for pituitary follicle-stimulating gonadotropin are considered of significance only in marked hypo- or hypergonadism. Estrogen determinations are useful in determining the presence of feminizing tumors of the ovary; 17 ketosteroid values are helpful in determining the cause of virilism; and pregnandiol determinations may be used as a gauge of corpus luteum function.

▪ It is becoming increasingly evident that the endocrine laboratory qualified to perform certain routine biological tests and hormone assays can offer an invaluable service to clinicians. An outstanding example of this is the widely used biological test for pregnancy, the clinical significance of which is well recognized.

With the rapid growth of endocrinology certain other tests have been suggested as useful aids in both diagnosis and prognosis. Many of these tests have not been generally available to practitioners and even when the services of a laboratory could be obtained the expense to the patient has made the use of such facilities prohibitive. In some respects this is fortunate since frequently the determinations have been of doubtful significance and the interpretations often misleading. With continued progress and the lapse of sufficient time for more critical evaluation, certain tests and assays are becoming accepted as useful diagnostic aids.

It is the purpose of this report to point out briefly some of the hormone assays that are

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being used in clinical medicine today and to evaluate certain claims concerning their usefulness in differential diagnosis. In general, these tests consist of qualitative or quantitative determinations of substances of endocrine origin excreted in the urine.

Chorionic Gonadotropin

During pregnancy a gonadotropic substance is excreted which is entirely different from any which are found in normal nonpregnant women. This substance is only found in the presence of living chorionic tissue and is called "chorionic gonadotropin" or anterior pituitary-like (A.P.L.) hormone. The appearance of this substance is the basis for the widely used pregnancy tests (Aschheim-Zondek or Friedman) based upon gonadal stimulation in the experimental animal. As far as accuracy of results are concerned it seems to make little difference which test is employed. Aschheim[1] claims 98 per cent positive diagnostic results with the mouse test in 925 normal pregnancies; and 99.5 per cent negative results in 1,075 nonpregnant control women. The majority of reports show the rabbit test to give correct positive reactions for pregnancy in 97-100 per cent of cases.

The high degree of accuracy obtained in these tests is in large part due to the specificity of the physiological effects of this gonadotropin; two characteristic effects being (a) luteinization of atretic follicles and (b) intrafollicular hemorrhage ("blood-spots").

Since large amounts of chorionic gonadotropin are elaborated by the chorionic tissue of the hydatid mole and by chorio-epithelioma we find here a special field of usefulness. Quantitative Aschheim-Zondek tests may be useful in detecting the existence of these abnormal growths. It was earlier thought that very high values for chorionic gonadotropin were diagnostic for these growths.[11,25] It is now clear that a single high value cannot be accepted as conclusive evidence. High values are also found during a brief period in early pregnancy, several hundred thousand rat units being sometimes found from twenty to fifty days after the first missed period.[10] However, after the third month, a high chorionic gonadotropin titre may be accepted as strong evidence of these pathological conditions. Furthermore, if the values do not show a decrease in repeated monthly tests it is highly probable that a tumor is present.

The finding of values equivalent to those characteristic for the greater part of pregnancy does not rule out the presence of chorionic tumor or hydatid mole since low values and even occasional negative tests have been found in the presence of either of these conditions.[15] In such a circumstance a single biological test affords very little aid in diagnosis. The detection of chorio-epithelioma after the removal of an hydatid mole by quantitative determinations of chorionic gonadotropin is occasionally complicated by either unusual and unexplainable persistence of gonadotropin excretion or by the possibility of an intervening pregnancy. Payne has recently expressed the view[24] that if, following molar evacuation, regularly space quantitative tests are made for six months to a year, it is possible to definitely differentiate between recovery and the development of chorio-epithelioma. There is little doubt but that repeated assays after the removal of a mole or chorio-epithelioma would lead to early recognition of incompleteness of evacuation.

Chorionic gonadotropin is also found in the urine in the presence of testicular teratoma. The amounts of the gonadotropin excreted have been found to vary from a hundred rat units or less per liter of urine to as much as one million rat units. A positive test for chorionic gonadotropin in a case of tumor of the testis can be accepted as diagnostic evidence of the malignancy of the growth. On the other hand a negative Aschheim-Zondek test does not rule out the possibility of a teratoma being present. Successive assays at regular intervals postoperatively are useful in determining the existence of metastases and as a guide to therapy.

Anterior Pituitary Gonadotropin

During the reproductive years relatively small amounts of anterior pituitary gonadotropic substances are excreted in the urine of men and women. In women the excretion of gonadotropin is low throughout the menstrual cycle but there is usually a cyclic appearance of increased amounts. The peak of excretion occurs most frequently near the middle of the cycle[7,13,18] and has been associated by some authors with the occurrence of ovulation.[6,21] However, the fact that Heller has recently reported multiple peaks

in some cycles would seem to minimize the importance of the urinary gonadotropin peak as an indication of ovulation. In addition to the variability in the number of peaks Heller also finds great variability with respect to their time of appearance and magnitude. This author considers it "unlikely that urinary gonadotropin determinations will be of any clinical diagnostic value except in the extremes of gonadal dysfunction."

It is well established that increased amounts of pituitary follicle-stimulating hormone (FSH) are excreted in the absence of ovarian function. Thus, following menopause and surgical castration or in amenorrhea due to ovarian failure, increased amounts of FSH are found in the blood and urine.[12,34] Tests for FSH can be of some use in determining whether the pituitary or ovary is at fault in cases of amenorrhea. In the event of pituitary failure little or no gonadotropin will be excreted, whereas, if the ovaries are at fault this substance will usually be found. The results of the test will therefore give some indication of the therapeutic treatment required. Since even in oöphorectomized women gonadotropin excretion fluctuates from day to day, one should not draw conclusions from a single gonadotropic test.

We are using in our laboratory a rather simple procedure for gauging pituitary gonadotropin function. The dried alcohol precipitate from 100 c.c. of a first voided morning specimen of urine is dissolved in tenth normal sodium bicarbonate and injected into four three-weeks-old mice so that each animal receives the equivalent of 25 c.c. of urine. A negative result may mean one of two things: the pituitary is either functioning normally or its activity is less than normal. Additional tests using larger amounts of urine would be necessary to determine which of the two conditions existed. On the other hand, if a positive response is obtained it is a definite indication of hyperpituitary activity, which in turn, points to extreme hypoövarianism.

Estrogen Assays

Equipped with an understanding of the normal estrogen excretion rates we should be able to use estrogen assays as an aid in the diagnosis of ovarian dysfunction. The early recognition of the excretion of abnormally large amounts of estrogens in pregnancy led to the use of estrogen assays as a satisfactory biological test for pregnancy. This test, though popular at one time, has been virtually replaced by the gonadal stimulation tests.

There are numerous instances where it would appear that estrogen assays would be of clinical use. Thus, in the case of many of the common ovarian dysfunctions it would be of some value to know the extent and nature of ovarian function. It should be remembered, however, that due to wide variations in normal estrogen excretion—during the cycle as well as between individuals—several successive assays must be made before any diagnostic value can be attached to such determinations.

Due to our still incomplete understanding of the mechanism of menstruation, even thorough investigations of the estrogen excretion are of doubtful value at present. Frank's study of blood and urine estrogen levels in amenorrheic patients revealed at least three groups—one with absent or greatly diminished secretion and excretion, another with normal estrogenic concentrations and a third in which the secretion and excretion were greatly increased. These differences make even a theoretical consideration of the underlying causes of amenorrhea difficult.

Large amounts of estrogen have been found in the urine of patients with ovarian tumors of the feminizing type, particularly granulosa cell tumor. The finding of continuous, high estrogenic titres is strong evidence of the presence of a granulosa cell tumor.

Occasionally this type of tumor occurs in children before the age of puberty resulting in precocious development of the secondary sexual characters. Estrogen assays would have some differential diagnostic value in those cases where the age of the patient or the absence of characteristic symptoms rendered the diagnosis difficult.

In view of laborious procedures involved in estrogen assays and their doubtful clinical value it is suggested that other diagnostic methods be relied upon. In most instances hyper- or hypoestrinization can be detected by a thorough physical examination supplemented with endometrial biopsies or the examination of vaginal smears.

Androgen Assays

Except during pregnancy when the concentration of estrogens in the urine is very high, biological assays for estrogenic activity must be employed. Within recent years, however, labora-

tories interested in androgen (male sex hormone) excretion in the human have used a colorimetric method introduced by Zimmerman[33] and further developed by others.[4,32] This method is based upon a color reaction which is produced when certain ketosteroid substances unite with metadinitrobenzene. To these substances Callow and associates gave the name 17-ketosteroids.

This colorimetric test does not distinguish between substances having androgenic activity and those which do not. For this reason values obtained with colorimetric methods are usually higher than those obtained by such biologic methods as the capon comb test. Since under normal and most abnormal conditions the androgens contribute the greater part of the chromogenic property of urinary extracts, Callow and associates were of the opinion that there is a significant correlation between the results obtained from biologic tests and from colorimetric determinations. Most other workers have accepted this view. Values are usually expressed in terms of milligrams equivalents or International Units of androsterone. The practicability of this test has made possible extensive studies of 17-ketosteroid excretion in normal males and females, as well as in patients with various endocrine disorders. Ostensibly, one primary purpose of these studies has been to determine whether or not a definite 17-ketosteroid value can be associated with a particular pathological condition. If this is found to be true this assay might become an extremely valuable diagnostic procedure.

Androgen and 17-ketosteroid excretion is found in both sexes with the average value for women somewhat lower than those for men. For example, Fraser and co-workers[14] report a range for normal females of 5.1 to 14.2 mg. androsterone per 24 hours with an average of 9 mg. as compared with a range of 8.1 to 22.6 mg. and an average of approximately 14 mg. for normal males.

It is generally assumed that the 17-ketosteroids are derived from the gonads and adrenal cortex. In the male, the steroids are produced by the testes and adrenal cortex.[8,9,14,19] While the studies of Fraser and associates on women with Addison's disease support the hypothesis that all the urinary 17-ketosteroids in the female originate from the adrenal cortex, this remains a controversial point. Callow and coworkers conclude that while 17-ketosteroid values in patients with Addison's disease are generally below normal there is sufficient variation to make the diagnostic value of this test somewhat unreliable.

Large amounts of 17-ketosteroids are excreted by patients with virilizing syndromes due to adrenal cortical hyperplasia or adrenal tumor.[3,5,14,17,22,23,28] The finding of an excessively high value is therefore strong evidence of adrenal cortical pathology. Although the values found in cases of adrenal tumor are generally higher than those in patients with adrenal cortical hyperplasia there is enough overlap to make such determinations unsatisfactory for differential diagnosis. However, the excretion of more than 100 mg. per day has only been found in tumor cases and these very high determinations would therefore be of definite diagnostic value.

In the case of androgen or 17-ketosteroid determinations, as with estrogen assays, it must be remembered that the daily excretion of these substances fluctuate and therefore several determinations should be made before diagnostic significance is attached to the findings.

Pregnandiol Glucuronidate Determinations

In 1937, Venning and Browne[29] recognized that progesterone, secreted by the corpus luteum, is excreted in the form of sodium pregnandiol glucuronidate, a physiologically inactive substance. The chemical structure of this compound was found to be very similar to that of progesterone so that by making correction for the difference in molecular weight, it was not difficult to express the gravimetric determination of pregnandiol glucuronidate in terms of progesterone.

There appears to be considerable individual variation in excretion of this substance ranging from a total of 3 mg. to 50 mg. per menstrual cycle. What this wide variation means is not definitely known but recent studies indicate that progesterone is not quantitatively converted to pregnandiol glucuronidate.[20,30] Since it is present in the urine only during the luteal phase of the cycle, measurements of this substance have been used as a means of determining the duration and functional activity of the corpus luteum. Certain precautions should be taken in evaluating the determinations since zero values have been found in the presence of circulating progesterone. On the other hand, the presence of pregnandiol in the urine may be taken as strong suggestive

evidence of a functional corpus luteum. Its presence is an indication of ovulation, though not a positive one, for it is believed that progesterone can be produced in the absence of ovulation.

In pregnancy, Browne, Henry and Venning[2] report the excretion of 4 to 10 mg. per twenty-four hours up to sixty days. These values approximate those found during the luteal phase of the menstrual cycle. From this time on the rate of excretion rises until near term when the daily excretion may be as much as 80 mg. Occasionally pregnandiol determinations have revealed a drop in excretion at about the time when an increase might be expected. This drop is thought to be due to a lag in the production of progesterone by the placenta. It is of interest that the tendency to abort is most frequently encountered at this time. The theory has been advanced that the uterus is rendered more sensitive and contractile due to a decrease in circulating progesterone. It is on the basis of this theory that progesterone therapy has been used in cases of threatened and habitual abortion. Due to the fact that progesterone therapy is frequently used prophylactically and is usually accompanied by supplemental therapy, it is difficult to evaluate the effectiveness of its use.

There is some evidence that in toxemias of pregnancy of the pre-eclamptic type there is a lowering of pregnandiol excretion.[26,31] The Smiths and their associates[27] have advanced the theory that the lowered progesterone production may be responsible for a change in the metabolism of the estrogens in these conditions. Hain,[16] however, does not subscribe to this therapy since she found large amounts of estrogens and pregnandiol being excreted by a severely eclamptic patient preceding and during labor. Additional information is to be desired concerning the possible association of the pre-eclamptic state with an altered production and metabolism of the hormones.

Conclusions

1. Assays of excreted hormones or related substances may be useful as an aid in the diagnosis of certain endocrine dyscrasias or as a guide to therapy.

2. With the exception of a few tests, such as those for chorionic gonadotropin and pituitary FSH, there are as yet no simple laboratory methods to aid the clinician in the diagnosis of disorders of endocrine origin. Only by thorough investigations can significant data be obtained which may be useful in establishing the nature of an endocrine disturbance.

3. Quantitative determinations of urinary chorionic gonadotropin are useful in detecting the presence of hydatid mole or chorio-epithelioma. These determinations are also of prognostic value in cases of testicular teratoma.

Tests for anterior pituitary FSH are of clinical significance only in instances of marked hypo- or hypergonadism. In these cases the results may give some indication of the therapeutic treatment required.

5. Although estrogen excretion is generally considered a reflection of ovarian activity, variations in rate of excretion limit the usefulness of assays of this substance. The continuous excretion of abnormally large amounts of estrogens is strong evidence of the presence of a granulosa-cell tumor.

6. 17-ketosteroid excretion studies are helpful in determining the cause of virilism since high values are characteristic of adrenal cortical hyperplasia and adrenal tumor.

7. Determinations of pregnandiol glucuronidate may be used as a means of gauging the extent of ovarian function especially with respect to the functional activity of the corpus luteum.

8. It is to be expected that the rapid progress in our understanding of normal and abnormal endocrine physiology will result in greater usefulness of hormone assays.

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MSMS

Hypersensitivity: A Neglected Phase of Allergy*

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Complement fixation, cultural study, and vaccine therapy, a laboratory aid in diagnosing and treating the hypersensitive patient. Hypersensitiveness is defined as an altered capacity with which cells of the human organism react excessively to contact with particular substances.

Vaccines made from these specific organisms are very potent and must be given in small doses. The dose is kept small throughout the treatment, not to exceed 0.30 c.c., average dose 0.10 c.c.

Better results are obtained from vaccines where primary foci of infection are found and eradicated.

Deficient complement in the patient's blood stream indicates a bad prognosis with any form of treatment, and is a definite contra-indication to surgical interference.

■ Hypersensitiveness may be defined as an altered capacity with which cells of the human organism react excessively to contact with particular substances. There are other terms in our literature used synonymously or very nearly so. Von Pirquet used the term "Allergy." Coca in 1922 suggested "Atopy." Other authors use the term idiosyncrasy. However, as our knowledge increases concerning this altered capacity of cells to react excessively on contact with certain substances, the term hypersensitiveness is gaining in favor as the one which best expresses this reaction.

Coca, in his book "Asthma and Hay Fever," lists over 1,000 different substances as the cause of hypersensitiveness. Probably though the number of things the human organism may become hypersensitive to is limited only by the number it may come in contact with. The avenue of contact may be through the gastro-intestinal, the upper respiratory tract, the skin, or the sensitizing substance may be elaborated within the system itself.

The cells of the body must dispose of, in some manner, any substance which finds access to the system. Foodstuffs are, through chemical processes, converted into compounds suitable for building or replacing the cell structure, or utilized to produce energy. Other substances, not so utilizable, are changed through chemical processes into compounds easily eliminated.

To many of these substances certain cells of the organism may become hypersensitive, *i.e.*, may take on an altered capacity through which they react excessively on contact with these substances.

The readiness with which a substance may produce a state of hypersensitiveness depends a great deal on the mode of entry. Horse serum for instance, introduced subcutaneously, intramuscularly or intravenously almost universally produces a hypersensitive state. Taken into the gastro-intestinal tract it usually does not.

The substances to which the cell of an organism may become hypersensitive divide themselves into two classes—those which are antigenic and those which are not. A substance is spoken of as antigenic when it is capable of stimulating antibody formation.

Into the class of nonantigenic substances fall those of comparatively simple molecular structure—substances that are readily diffusible through the cell membranes without preliminary breaking down. This class may be illustrated by acetyl salicylic acid, cocaine, novocaine, and quinine.

Antigenic substances are those of more complex molecular structure—molecules too large to be diffusible through the cell membranes, and must be first altered before the cells can dispose of them.

*Read at the seventy-seventh annual meeting of the Michigan State Medical Society, Grand Rapids, September 25, 1942.

The cells, in preparing or breaking down such substances elaborate a chemical commonly spoken of as antibodies. These antibodies then enter into reaction with the substance which we will call antigen with the help of the blood complement splitting them up so that they are diffusible through the cell membranes. These split products produced by the reaction of antigen, antibody and complement are often toxic to the cells and produce the symptoms which we recognize clinically as "Allergy."

Now as to the nature of these toxic substances: The idea that they are lipoids has been advanced, but given very little support.

Gay and Heidelberger have shown rather conclusively that the specific soluble substance, the term they have applied to the toxic product of the pneumococcus, is a complex polysaccharid.

In general, these toxic substances are looked upon as proteins with a carbohydrate radical attached; it is the nature of this carbohydrate radical and its location in the molecule which determines its specificity.

Just what the exact nature of the reaction between complement, antigen, and antibody and the character of the resulting substance is, still is largely a matter of theory due to the complexity of the molecules involved, and the inability to get them in sufficiently pure form for study.

This reaction is looked upon by some researchers as a splitting up of a complex protein molecule into simpler and sometimes highly toxic molecules.

By others it is held that the blood serum contains a ferment and antiferment, which normally neutralize each other, and the antibody complement reaction removes the antiferment leaving the ferment free to break down the more complex molecules into the simpler, more readily diffusible and often toxic molecules. This view is based largely on the recognized toxic properties of some of the peptones and polypeptids when introduced into the blood stream.

Although we are still quite hazy about the exact workings of the reaction between complement antigen and antibody, and the character of new substance or substances formed, we do know and can readily demonstrate that a highly toxic substance may be formed as a result of a reaction involving complement antigen, and its corresponding antibodies. This reaction does not take place in the absence of any one of the three.

It was originally thought that antigen and toxin were separate and distinct substances. But subsequent researches have shown them to be one and the same thing, the difference is in quantity and not quality. In other words—a substance may be present in sufficient quantity to stimulate antibody formation while not sufficiently concentrated to produce a toxic reaction.

Thus far we have considered the sensitizing substances and their reactions with antibody and complement.

To take up for consideration the cells of the organism which react to antigenic substances by the formation of antibody, immediately brings to our attention the so-called reticulo-endothelial system, first described by "Aschoff" some 30 years ago.

The functions of the cells comprising this system are primarily phagocytosis and antibody formation. The main depots for these cells are the spleen, the liver, the bone marrow, the omentum and the lungs. Other cells belonging to this system are scattered in smaller numbers throughout the loose areolar connective tissue of the entire body and are variously described as histiocytes, macrophages, clasmatocytes and resting wandering cells. Under pathological stimulation cells possessing the primary properties of the cells comprising the reticulo-endothelial system may arise from the serous membranes lining the body cavities, the capillary endothelium, the fibroblasts; and also the small lymphocyte of the circulating blood may wander into the tissues, undergo changes and take on the properties of the cells of the reticulo-endothelial system.

Most of these processes we have demonstrated experimentally in the laboratory.

By repeatedly introducing small quantities of antigen into the circulation of a rabbit we can stimulate it to produce circulating antibodies in high concentration.

By introducing a large quantity of an homologous antigen into the circulation of a previously sensitized animal we can completely exhaust the complement in the circulating blood.

The introduction of the same quantity of antigen to which the animal *has not been* previously sensitized alters the quantity of neither antibody nor the complement.

If the cells of the reticulo-endothelial system

are first blocked by the introduction of an adequate amount of colloidal carbon in the form of india ink we are unable to stimulate any appreciable amount of antibody formation.

When an animal so treated is sacrificed and the tissues sectioned we find the cells of the reticulo-endothelial system clogged with phagocytosed carbon particles.

If an animal is first sensitized and then india ink injected we find on sacrificing it that the main depots of reticulo-endothelial cells much more heavily loaded with carbon particles. This is due to hyperplasia of these cells in the sensitized animal.

By sensitizing the skin of a rabbit with repeated intracutaneous injections of an antigen we can demonstrate the formation of these cells from the fibroblasts; also lymphocytes may be seen undergoing similar changes. When the sensitizing antigen is a suspension of bacteria we can demonstrate phagocytosis of the bacteria.

It is this sensitizing bacterial toxin or antigen liberated by a focus of infection which we are endeavoring to evaluate in this study. If we accept the hypothesis of bacterial sensitization our problem then is to determine the source of the offending organism, also its virulence, that is, its capacity to produce sensitizing toxins. We must also determine the reaction of tissue cells to these toxins.

It is well established that hypersensitive tissues form antibodies in excess, the cells become over-saturated with antibodies, and the excess is released into the circulation.

In our laboratory we have developed a form of complement fixation for detection of the complement fixing antibodies, by a modification of this test, we are able to determine the antigen producing properties of organisms recovered from foci of infection. We are using this test because it is considered the most sensitive and the most economical, when using a large number of antigens. At present we are using about 35 antigens, which include colon bacillus, micrococcus catarrhalis, staphylococcus albus, and aureus, and the different strains of streptococcus—hemolytic, nonhemolytic and viridans. The complement fixation test of the patient's blood against these antigens shows which organisms are stimulating excess antibody formation, that is, the specific organism to which the patient is hypersensitive.

We then culture all accessible tissues of the patient including urine and bowel contents. The cultures are collected in a media of beef heart infusion broth, then transferred to blood plates within two hours. There it is allowed to grow from 12 to 48 hours. Then individual colonies are picked up and put into brain broth and incubated 24 hours. It is then checked under a microscope to be sure it is a pure culture. If there is no contamination it is again placed into 10 c.c. of beef heart infusion broth for growth of organisms in sufficient quantity to make an autogenous vaccine, and for tests of antigen or toxin producing qualities. Cultures are also planted on sugars for differentiation of the individual strain of organism.

The patient suffering from bacterial hypersensitiveness complains of a chronic pharyngitis, and congestion of the nose usually present the year round, more marked during the changing seasons. Other constitutional symptoms may be the various forms of rheumatism, arthritis, myositis, neuralgia, and iritis. We also believe that some forms of asthma and urticaria, and states of debility not otherwise explained, may be included in this group.

Once we have determined the offending organisms and have located the focus of infection, the treatment is primarily surgical; by this we mean the actual removal of the pathological tissue, and the surgery must be adequate, not necessarily radical, yet complete enough to remove the focus.

However, our blood and cultural studies will have a decided influence in the treatment of any given case. We do as little surgical interference as possible in the acute phase of the infection. This is the stage when the toxins are being produced more rapidly than antibody formation.

Another important factor disclosed by the complement fixation test is the amount of complement present in the blood. We don't know exactly what this substance is. We do know that it is present in all normal blood in sufficient quantity to unite antigen or toxin with the antibody produced by the reticulo-endothelial structures.

Occasionally, we find a patient seriously lacking in complement. This is a danger signal as no toxin will be fixed by antibodies. This may be the explanation of our deaths in cases of mild infections, or following minor surgical procedures. These cases are subjected to no surgical

interferences until the presence of complement has been confirmed by another Complement Fixation test.

This treatment will cover a large number of your cases. However, when the focus, if found to be located beyond the reach of surgery, such as in the intestinal tract or prostate gland, or when the patient is not a good surgical risk, due to insufficient complement, bad temperament, age or physical condition, and, as is often the case, his immunity is so broken down that even after the foci have been removed, he will not respond to dietary or medical care, then we make an autogenous vaccine and attempt to desensitize him by a course of vaccine treatments.

The vaccine consists of the antigen producing organisms recovered from the patient, and those organisms to which the patient is sensitive as shown by the complement fixation test. The organisms are subcultured only twice, and no stock or laboratory grown organism used. Each vaccine may have from five to twelve strains of organisms.

The vaccine is made up in a dilution of from 50 to 200 organisms of each strain per cubic centimeter. The dose is regulated by the reaction of the patient. When the patient presents acute symptoms, such as an inflamed joint or acute iritis, they are very likely to have a marked reaction to even a small dose.

When no acute symptoms are present they will usually tolerate a larger dose without reaction. However, we have seen marked reactions in just such cases, even with a small dose. We try to regulate the dose so that the patient gets no reaction. To arrive at this it is usually necessary to carefully increase the dose to the point of slight reaction, then decrease again. If we get no reaction with a reasonably large dose, say 5 c.c., we do not believe that the vaccine is of much value.

The initial dose is 0.1 c.c., the subsequent doses increased or decreased according to reaction. In obtaining our best results we have seldom given more than 0.3 c.c., nor less than 0.02 c.c.

The interval between inoculations is judged by the patient's feeling of well-being or response to the vaccine. There is usually an improvement after each injection, lasting from four to five days, then a recurrence of symptoms, so we make our interval five days. This gives definite, though sometimes slow improvement in the general situation. In unfavorable reactions the patient has an increase of symptoms and fatigue. We have had no local inflammatory reaction nor anaphylactic shock in our experience. Apparently the important thing is proper regulation of dosage. In a viable vaccine the dose is small.

We now have a great respect for a properly prepared autogenous vaccine. Its action is specific, and if not properly controlled, may do more harm than good.

Our findings are based on the study of 5,000 private patients. The laboratory findings have been a distinct help in diagnosing and treating the hypersensitive patient.

Summary

1. Complement fixation, cultural study, and vaccine therapy, a laboratory aid in diagnosing and treating the hypersensitive patient.

2. Vaccines made from these specific organisms are very potent and must be given in small doses.

3. Better results are obtained from vaccines where primary foci of infection are found and eradicated.

4. Deficient complement in the patient's blood stream indicates a bad prognosis with any form of treatment, and is a definite contra-indication to surgical interference.

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POLIOMYELITIS CONSULTATIONS

The Michigan Crippled Children's Commission has sent to every County Medical Society Secretary, and to every full-time Health Officer, a Bulletin announcing that the Commission again this year establish poliomyelitis consultation service as it has in the past, for children up to twenty years of age. This is the original consultation by which the diagnosis is established.

The details of procedure are on file with the secretary of the County Medical Society and the full-time Health Officers, who should be contacted when such consultation is needed. The State is divided into fifteen districts, and both pediatric and orthopedic consultants available are listed.

It should be thoroughly understood that this service is only for those cases where the families are unable to make their own arrangements.

Intracapsular Cataract Extraction

With a Modification of Dimitry's Suction Syringe*

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■ Cataract extraction with a suction is not new but since Dimitry's experience with his improved suction syringe, a great many things have been said for and against the use of such an apparatus for removing cataracts.

It was because of such comments that we purchased a Dimitry syringe and decided to try it. This is an endeavor to report the results in fifty cases in which a modification of Dimitry's Suction apparatus was used in performing intracapsular cataract operations.

In addition six other cases are included in which Dimitry's modified syringe was used to deliver the lens after other methods had failed.

In the first few cases Dimitry syringe only was used (Fig. 1). However, it was soon found to be difficult to use the syringe between two fingers and with the thumb on the plunger. The tendency was to transfer the grasp of the syringe down on the barrel near the suction tip between the thumb and first two fingers in an endeavor to handle the syringe (Fig. 2). It seemed logical that if the syringe could be held that way at all times and after introducing it into the anterior chamber, be able to let the plunger come up and produce the suction, the whole thing would be simplified, and this instrument would be handled with the thumb and first two fingers like any other eye instrument, such as an iris forceps. With this in mind such a modification was made of the Dimitry apparatus which simplified the delivery of the lens after the suction had been applied (Fig. 3).

With this modification, one is able to hold the syringe at all times between the first two fingers and thumb, while introducing it into the anterior chamber while releasing the plunger, creating the suction, and then on throughout the delivery of the lens and the capsule.

All cataract patients received a drop of 1 per cent atropine the night before operation and another the next morning to dilate the pupil as widely as possible. Anesthesia consisted of local 0.5 per cent of pontocaine to the cornea and conjunctiva, one drop every three minutes for six drops. In addition 4 per cent novocaine was used for the following: 1.5 c.c. injected into the muscle cone to anesthetize the ciliary ganglion, 1 c.c. of 4 per cent novocaine in the upper culdesac to facilitate inserting a superior rectus suture, and just enough in the lid margins to place sutures for retraction. Sutures were substituted for mechanical lid retractors because they caused less pressure and took less space. A Van Lint akinesis of the lid is also done with 2 per cent novocaine.

A bridle suture was used in all cases and the lids were held open by means of sutures through the skin margins, two above which were anchored and one below which was held by the assistant.

Section was made with a Von Graefe knife ending with a small conjunctival flap. Conjunctival sutures were inserted and pulled out of the way before proceeding.

Iridectomy was done on all cases in which the pupil was not sufficiently dilated. This was done in about two-thirds of the cases. Otherwise the lens was removed through a round pupil or after a basal iridotomy.

The suction tip was passed into the anterior chamber and was allowed to grasp the lens as near the top of the lens as the iris or iris pillars will permit, after an iridectomy. With a spoon or muscle hook the zonular fibres were broken below as in any other intracapsular operation. Then with pressure below (at 6:00 o'clock) the syringe was slowly elevated through about twenty-five degrees. This combined with the pressure below lifted the lens up into the anterior chamber and it was then slowly pulled and expressed out of the eye. The conjunctival sutures were tied and if the iris were protruding, it was replaced in the eye. Before padding the eye two drops of 1 per cent esserin was instilled in the eye.

Some surgeons place the suction tip at or near 6:00 o'clock. This necessitates tumbling the lens. The method described above does not tumble the lens but simply helps bring it up into the anterior chamber and then out of the eye.

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Fig. 1. Dimitry suction syringe held between two fingers with thumb on plunger.



Fig. 2. Dimitry suction syringe held near the base in an endeavor to control it better.



Fig. 3. Dimitry suction syringe with modification which allows one to hold the syringe between the thumb and second finger, the index finger being able to release the suction when desired.

In this series of fifty cases an iridectomy was performed in thirty-five cases and in the remaining fifteen the lens was delivered through a round pupil. The reason for not doing an iridectomy in these fifteen cases was due to extreme dilatation of the pupil. A significant fact is that postoperative complication of prolapsed iris occurred in two round pupils.

Types of Cataracts

(Impressions made with the slit-lamp before surgery was done.)

Hypermature	4
Mature, complicated with diabetes	5
Congenital, with congenital coloboma, and extremely small eye	1
Immature with visual acuity of 20/200 or less. (Judged immature because of a dark band between capsule and lens nucleus)	12
Mature with no soft lens substance between nucleus and capsule	16
Mature but nucleus of the brown hard morgagnian type, those that are hard to tumble or mold during the operation	12

In reporting these results, it should be emphasized that though fifty cases are not sufficient to make any mature judgment, the results are interesting especially in a discussion of the failures. Therefore, no attempt will be made to be purely statistical.

All told, Dimitry's modified suction was used in fifty-six cases. In fifty of these the instrument was used alone and in the other six the instrument was used to deliver the lens after some other type of intracapsular surgery had already been tried and failed. A discussion of these six cases is also of interest.

Average age was fifty-nine years, all were over forty-five years except one case and that was a seventeen-year-old congenital diabetic. One reason for trying to deliver the lens in this case was based on previous disastrous experiences in needling such cases. This was one of the failures, simply because the zonular fibres were too strong. This case proved definitely just how much suction the apparatus gave before it came off. It did not rupture the capsule though replaced twice after coming off as a result of too much pull. In this case after failing to deliver the lens by suction the anterior capsule was opened and the soft lens substance washed out. The final visual acuity was most gratifying for a diabetic of this age.

Of the fifty cases forty-three were successful (i.e., the lens was removed in its capsule). Seven cases were unsuccessful. Four of these capsules ruptured before the lens could be delivered necessitating capsulotomy and expression of the lens nucleus. All four of these were in hypermature cataracts, which is significant. This type is the most difficult to remove in its capsule using the forceps and tumbling method.

The fifth was the seventeen-year-old congenital diabetic previously referred to. In another case the suction would not hold. Whether part of the iris was in the suction tip or whether the apparatus was not working is not certain. It was the only instance in which the suction would not take hold.

The seventh failure was in a very shallow anterior chamber, and perhaps the section was not large enough. In introducing the suction, the tip ruptured the capsule of the lens before suction could be applied.

These last two were finished with a capsulot-

omy and expression of the lens nucleus as in an ordinary operation.

The six cases in which the suction syringe was used to deliver the lens after other methods of delivery had failed are worth comment. In five of these forceps were used and the lens partially tumbled when the forceps came off and let the lens either fall back into its original place or in on case turned half over. Rather than use a loop, the suction was used to grasp the lens and hold it so that it could be expressed out of the eye. These cases alone justified the purchase price of the apparatus.

The sixth case is worth summarizing in greater detail. This was a congenital small eye with congenital coloboma and blind in the opposite eye. The operation of choice was naturally a capsulotomy and expression of the lens through the enlarged coloboma. Everything went fine; an extremely large section was made to begin with, but the lens could not be expressed no matter how much manipulation. As a last resort the suction was applied to the lens itself even after capsulotomy and was successfully delivered.

These six cases might be considered complicated cases, but they were included because we felt the use of the suction syringe had helped to get us out of a difficult situation.

Of the complications some of them are interesting, namely loss of vitreous, prolapsed iris, secondary glaucoma and detachment of the retina.

Vitreous was lost in seven cases, in three cases of the forty-three successful operations, in two of the seven unsuccessful cases and in two of the complicated series of six where the suction had been used as an aid after other methods had created a difficult situation.

In the successful series vitreous was lost just at the end of the operation in two cases, and it was probably due to too much push from below. In the third case it followed the replacement of a prolapsed pillar and was not due to the suction syringe at all but to rupture of the vitreous membrane by the iris repository.

Of the two cases in the seven unsuccessful series trauma from too much manipulation could only explain the rupture of the vitreous membrane which followed the lens expression.

In the two cases in the complicated series it was undoubtedly due to the same cause and came at the end of the operations, but considering everything it was a very easy payment in a difficult situation.

A significant fact worth noticing is that no loss of vitreous occurred in all cases whether in the complicated series of six or the original series of fifty as a direct result of vitreous being sucked into the syringe. This fact is significant.

Other complications were from the operation and not due in any way to the use of the suction syringe—

First, prolapsed iris occurred in two cases which needs no comment; again secondary glaucoma in two cases and both of these were rather difficult to handle and accounted for two of the poor postoperative vision in the series.

Another complication was three cases of detachment of the retina in the fifty-six cases, two of which ended rather disastrously as regards visual acuity and the third after operation for detachment has now a visual acuity of 20/70. One patient lost his eye completely and that due to a massive choroidal hemorrhage. The operation was successful and he left the operating room with an excellent eye but three hours later he complained of pain in the operated eye. Shortly after the dressing became soaked with blood and a second dressing as well. Observation of the eye showed the wound open and a large blood clot in the wound filling the anterior chamber. The eye was eventually removed and section of it showed the eyeball to be filled with blood clot.

Comment

It is not possible to make any mature comments with only fifty cases. A much greater series would be necessary.

The following are listed and might be considered impressions made rather than mature deductions:

1. Extraction by means of suction is one way of doing an intracapsular cataract operation but by no means the only way. It is simply another method to add to the many other equally successful methods.

2. With continued use one may become quite adept in delivering a lens in its capsule with a suction. Most of the failures occurred early in the series and might be considered as due to trying a new method.

3. It is not the only method to be used in all types of cataract removal. Its failure especially in the hypermature cataract in this series was par-

ticularly noted. This type of cataract has always been most difficult to remove in its capsule with the forceps and tumbling method.

4. It is a less delicate way than the use of forceps. One has to be more dexterous to deliver a lens in its capsule with forceps and tumbling it out of the eye.

5. The suction syringe of Dimitry is worth having in one's bag of instruments as another help which is illustrated in its use in the six so-called complicated cases.

6. An interesting observation is that the senior member of our staff who has been doing intracapsular surgery with forceps for years, after trying Dimitry's suction a number of times finally reverted back to the use of forceps feeling he could do his best work that way.

This last statement sums up all comments on the pros and cons of cataract surgery. It is not the way one does it but the end result that always counts.

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Vaccine Therapy in the Treatment of Uveitis*

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■ This discussion intends to review the various forms of vaccine administration as an adjunct to other treatment for acute, recurrent and chronic forms of uveitis. In addition, it will accent a particular method for developing a specific vaccine used in desensitizing by repeated small subcutaneous doses, patients with endogenous uveitis, frequently referred to as having an etiologic background of focal infection, or primary foci.

Foreign Proteins

Newton in 1935 published a report on accepted uses of vaccine in his "Empirical Treatment of Uveitis," mentioning in this paper, particular preferences of various clinicians. Of the foreign proteins, typhoid vaccine was given by the majority, in initial doses of 25,000,000 intravenously, following on recovery from the resulting fever with a second dose, increasing or decreasing in size dependent upon the first reaction. Thereafter, subsequent doses are repeated on alternate days. This is a useful treatment in most forms of uveitis, regardless of etiology, even though the precise nature of beneficial reaction from foreign protein is little understood. It is not recommended in malignant exudative forms of tuberculous uveitis, or in individuals where advanced age or other contraindications exist. For those not able to risk typhoid vaccine, a more moderate substitute can be utilized, such as Typhoid "H" antigen, this also being useful in chronic forms where long continued usage is desired. Milk, diphtheria antitoxin, and bacterial antigen have been given, the latter recommended by Weiner. Milk is widely used with a dosage of 5 to 10 c.c. intramuscularly. With diphtheria antitoxin, one must be particularly careful of serum reactions and first test for sensitivity. Würdemann has used rheumatism bacterial filtrate of pathogenic organisms.

Killed broth culture of prodigiosus and streptococcus fluid has been given by Joseph Levine in 3 minim doses intravenously, the patient having four to five hours in which to get home before suffering the reaction, this lasting twelve to twenty-four hours.

Typhoid vaccine offers us a foreign protein with powerful reaction and this is preferred where milder reactions will not give the desired clinical response.

Foreign protein may be of value in tuberculous forms of uveitis in addition to tuberculin therapy. It may enhance the beneficial effect from antiluetic therapy in syphilitic uveitis.

Patients with recurrent uveitis or acute exacerbations of the chronic type will sometimes present themselves voluntarily for periodic injections of mild foreign protein when a flareup is imminent, with beneficial results.

The tuberculin treatment of the tuberculous uveitis was described well by Adler and Meyer in 1937 in their paper on "Tuberculous Lesions of the Uveal Tract" with a review of the literature. It is a method of dosage with which most authorities are in agreement, and it is generally accepted that the aim is desensitization with doses kept below the point of local and focal reaction, necessarily used over a long period of time.

*Read at the seventy-seventh annual meeting of the Michigan State Medical Society, Grand Rapids, September 25, 1942.

Etiology

I have not adhered strictly to the title of this paper according to Woods definition of vaccine therapy, this therapy being essentially active immunization of the patient with specific organisms. Alan Woods brought to date in 1933 the work done in vaccine therapy in his monograph "Allergy and Immunity in Ophthalmology." A consideration first as to the etiologic importance of focal infection is advisable. Grayton and Woods in 1941 analyzed 562 completely studied hospitalized cases of uveitis and gave a comprehensive report of the etiology of uveitis. Their percentage of cases with definite evidence of etiologic factor credited 23.5 per cent to tuberculosis and 8.0 per cent to syphilis as compared to 5.5 per cent to foci of infection. For the patients with presumptive evidence the percentage attributed to tuberculosis was 26.1 per cent making a total of 49.7 per cent, that for syphilis was 2.5 per cent, making a total of 10.5 per cent, and for focal infection 20.6 per cent or a total of 26.1 per cent. The authors particularly emphasize the large number of cases presumed due to focal infection as being on shaky ground, and state that there is an element of doubt as to the accuracy of any diagnosis in which uveitis is attributed to a focus of infection. This is a statement difficult not to accept, proof to the contrary seeming so evasive.

Yet when one selects a group of patients, for any reason, out of a much larger group of patients having a diagnosis of uveitis one immediately introduces a misleading element in the statistics. The fact that 562 patients were hospitalized probably places them in a group by themselves, a total of 1500 cases having gone through the clinic. Duke Elder in his Textbook of Ophthalmology, Vol. III, throws the majority of uveitis cases into a nondescript, little understood classification with etiology difficult to prove. He believes allergic reaction to the streptococcus as the most common cause of endogenous uveitis, placing allergy to the tubercle bacillus second. He of course admits the difficulty of proof and the necessity to base conclusions on circumstantial evidence.

Allergy

If there is a group of uveitis due to an allergic ocular response to the staphyloccus and streptococcus in activated primary foci of infection, and if there is a method for supporting other treatment by desensitization to the offending organisms so that natural immunity may protect the ocular structure from further damage, it would be of considerable interest. Woods, in 1940, stated:

> "When the complexity of bacterial hypersensitivity and vaccine therapy are considered, there appears to be little justification for many of the present therapeutic procedures with bacterial vaccines and products. It must be conceded that in the majority of instances it is only shotgun therapy and any beneficial results observed are quite as likely to be general nonspecific effects as to be the specific reactions to the injected bacteria."

Applebaum, in 1940, discussed bacterial allergy in the eye associated with foci of infection and his conclusions are based on experimental evidence of many investigators. An immunity is acquired by the formation of circulating antibodies on exposure to an antigen and this will protect to a degree against later exposures to the same antigen. Tissue cells may become sensitized by fixed antibodies producing a degree of hypersensitivity or state of allergy. The balance of the immunity and hypersensitivity will determine the severity or mildness of a reaction in the individual, either general or local. Immunity can thereby temper the reaction to doses of antigen, depending upon the degree of cell sensitivity. This is well demonstrated in tuberculosis.

Focal Infections

Experimental work points to the conclusion that bacterial infection can produce definite hypersensitivity in the ocular tissues. The bacterial products or toxins may reach the eye from a remote focus through the blood or lymph, and subsequent absorption of bacterial products or toxins from a primary focus evokes in the sensitized tissue an allergic inflammatory reaction. Swift and Derrick definitely showed that the ideal manner of creating allergic states was by chronic absorption from a limited focus, where tissue destruction occurred. Clinical proof is difficult to bring, as experimentation with the human eye is usually impossible, and as Woods expresses it, the best evidence that can be produced will probably be proper desensitization of such patients accompanied by clinical improvement in the eyes.

Circumstantial evidence of the relationships between foci of infection and uveitis is in abundance. To mention a few examples met with personally:

Extraction of teeth in the presence of active pyorrhea followed quickly by focal reaction and rapid quieting of the inflamed eye. Focal reaction in the same patient from a small subcutaneous injection of specific vaccine, some organisms of which were recovered from the pyorrhea pockets.

Many examples of focal reaction in the eye following massage of a chronically infected prostate, or the case of acute flareup of uveitis, repeatedly following horse back riding in the presence of an active anal cryptitis.

Active nasal and sinus inflammation yearly on return from Florida to Michigan, always followed by recurrent attacks of uveitis, and this only active at such a time.

To offer more specific proof and properly desensitize, one must know not only the organisms responsible, but all of their characteristics so that a vaccine can be made up as nearly specific as is possible. Thus, a stock vaccine is no more than shotgun procedure.

Skin testing is difficult to evaluate since a high percentage of normal adults will react in a positive manner to the streptococcus or its by-products. Berens cultured organisms obtained from foci and interpreted their specificity by skin testing the patients, but no good conclusions were drawn, although 14 of 17 given therapy improved.

Specific Vaccines

S. W. Wallace of Jennings Hospital, Detroit, has been interested for years, both experimentally and clinically, in producing a specific vaccine obtained by evaluation of the complement fixation studied to many pathogenic bacteria, and careful and complete culture studies of organisms obtained from all possible foci. In a discussion of bacterial hypersensitivity given at this same meeting, this method of study is more particularly analyzed and described by C. F. Brunk.

In attempting to correlate this work with uveitis, I have had too few cases for statistical analysis, but the experience points to future possibilities of more close clinical study of this group of patients. With careful cultural studies made to determine the characteristics and antigenic strength of organisms obtained from foci, and the knowledge of abnormal hypersensitivity to definitely known strains of bacteria, one is, I believe, in better position to evaluate the importance of a focus.

In study of the patient, a complete medical examination is necessity, with laboratory and x-ray aids to rule out other possible etiologic factors.

Cultures are taken routinely, of the nose and throat and stool, with additional studies made where indicated or possible, of pyorrhea pockets, extracted teeth, anal crypts, prostatic secretions, urine, cervix or of surgically removed infected tissue. These are carefully studied for classification on sugars and the antigenic properties of each organism determined by running against 4 to 6 known sera of certain complement fixation reaction. Each strain is tested in this manner.

A blood sample of the patient is taken during this time, and studied for complement fixation reactions following the technique developed by Hajapoules and Burbank of New York. Bordet and Gengou, in 1901 clearly described the phenomena of complement fixation. They described a third substance necessary to effect union between an antigen and its specific or corresponding antibody, and this was termed complement or alexion. Complement is a more or less constant element of blood serum which is closely associated with the globulin fraction of the serum protein from which it has never been successfully separated. It is nonspecific and unites with any antigen antibody combination.

Technique

The technique by Wallace utilizes 35 separate pathogenic antigens selected for activity and toxin producing qualities or properties. These are run separately with measured quantities of the patient's serum, to determine whether the antibodies are present for these specific antigens to unite with, and in what degree. The fixation and its degree is measured by the amount of complement left free. Experimental work with rabbits proved the reliability of specific antibody formation, results being consistent.

The antigens are standardized so that comparisons may be made with the average normal individual for interpretation.

Three types of variations are found in the test:

1. Diminished or depleted antibody.
2. Excessive antibody.
3. Diminution or exhaustion of complement.

With the culture and complement fixation studies at hand attention can be turned to the focus which shows the presence of toxin-producing organisms with strong antigenic properties. This

would deserve eradication or treatment if possible, whereas a suspected focus without organisms of this type may be considered innocent. It is in the first situation that best results are obtained by removal of foci.

Vaccine can be prepared by utilizing the important organisms found on culture, and adding to this any of the strains of antigens to which the blood serum of the individual proved excessive antibody formation, since this type of reaction is that found in the allergic or hypersensitive state. This vaccine will then be more than an autogenous vaccine, having a number of the commoner antigens to which the patient is sensitive. It is therefore considered specific, although with all this study, there are still limitations as to obtaining all offending antigens or complex proteins.

If a definitely toxic focus is removed, time is given for recovery of the secondary allergic inflammation and if not successful, vaccine is used in desensitizing doses, using minute doses of dilute vaccine and keeping the dosage small. Vaccine is also used where there is no definite indication for removal of foci. It is given every five days for at least three months. One will expect to get gradual improvement in chronic forms of uveitis and a disappearance of recurrences or diminishing severity of acute attacks if the vaccine is of any help.

In uveitis as well as in several cases of allergic type of kerato-conjunctivitis, there have been focal reactions with small doses of this vaccine, indicating specificity, and necessitating further dilutions until sufficiently desensitized.

Most of the cases studied in this manner where other causes have been ruled out have shown improvement where a well-established focus has been removed or treated. A few in addition have derived benefit by following this with the vaccine therapy. The eyes have remained quiet or the recurrences have decreased in frequency and severity. Thus, this approach to the problem may be of benefit more because of a thorough evaluation of the importance of foci, rather than the vaccine developed. However, the vaccine has possibilities as supplemental therapy and may some day be better understood.

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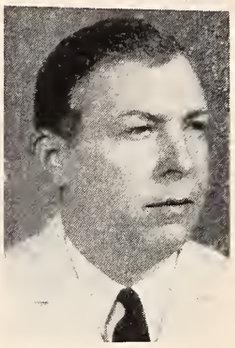
You owe much of your medical security today to the past activities of organized medicine. You have an obligation to those who follow. Will you help carry on?

The Significance and Management of Joint Pain*

By Charley J. Smyth, M.D.
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and

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Pain is an important factor in incapacitating patients with acute joint disease and in the production of deformities in chronic joint disease. The joint tissues receive their nerve supply from mixed nerves and terminate as free nerve endings in a nerve plexus or in special nerve organs. The importance of pain in the differential diagnosis of joint diseases is emphasized. In the treatment of arthritis and allied disorders satisfactory analgesia can usually be accomplished by the proper use of rest, splints, drugs, roentgen irradiation therapy and other physical measures.

■ Pain is usually the one symptom which compels a patient with joint disease to seek the aid of a physician. In such a case unless the cause for the pain is immediately evident, many physicians are inclined to attribute the symptoms to rheumatism or neuritis, and to advise symptomatic treatment. The results of this program of management are frequently unsatisfactory and have led some doctors to assume an attitude of

*From the Rackham Arthritis Research Unit of the Horace H. Rackham School of Graduate Studies and the Department of Internal Medicine, the Medical School, University of Michigan. Read at the seventy-seventh annual meeting of the Michigan State Medical Society, Grand Rapids, September 25, 1942.

defeatism regarding the treatment of painful joints. This attitude certainly is not justified, because if a specific diagnosis is made, satisfactory treatment can be instituted. It is the responsibility of each physician in every community to recognize and adequately treat patients with arthritis and allied painful joint conditions, otherwise they may fall prey to quacks and charlatans.

We have been impressed that pain and its control is one of the major concerns of the physician confronted with a patient suffering from arthritis. A careful search of the literature, however, revealed a striking lack of information regarding the factors responsible for joint pain and of the pathways over which painful impulses from joints reach the higher centers. The present discourse is a result of an investigative study of the present knowledge of joint pain and an interpretation of this information as it applies to the diagnosis and management of patients who complain of joint discomfort. It is further intended to indicate the necessity of a comprehensive knowledge of this important symptom for the establishment of rational methods of therapy in some of the more common joint diseases.

Innervation of Joints

As a basis for an understanding of joint pain we studied the distribution, type, number and function of nerves in each tissue composing a joint. The complete results of this study will be the subject of another publication. For the purpose of this discussion it is sufficient to know that the joints receive their nerve supply from the mixed nerves which also innervate the muscles, bones and skin of that area. The articular branches enter and richly supply the joint capsule and distribute terminal branches of unmyelinated and finely myelinated fibers to the ligaments, periosteum and synovial membrane. We found no nerve fibers in the cortical bone or in the articular cartilage. The nerves terminate in one of three ways: as free nerve endings, in a nerve network or plexus, or in special nerve organs.

Physiology of Joint Pain

There are some accepted principles regarding the physiology of pain that apply to the interpretation of this sensation in joints. It has been shown by Adrian[1] and confirmed by Heinbecker and Bishop[5] that impulses produced by painful stimuli are distinct from those produced by pressure or touch and that pain impulses are conducted only over pain fibers. This principle is now generally accepted and we can conclude that painful sensations from joints are carried along fibers which transmit no other sensations.

Recent evidence presented by Gasser[3] and confirmed by others indicates that the sensation of pain is mediated by fine unmyelinated or finely myelinated nerve fibers. The free nerve endings and the terminal nerve plexus in joint structures are morphologically like the fibers described by Gasser and it seems logical to allocate to them the specific function of pain reception.

There are a few references in the literature regarding the question of the mechanism which serves to initiate pain in joints. The factors in joint disease most likely responsible for pain are the stretching of the terminal plexus or nerve net by hyperemia, edema and inflammatory exudate. Another contributory factor is the stretching and traction caused by muscle spasm on the sensitive endings in the periosteum at the site of the tendenous insertions. Improper balance adds to the traction and strain on both the ligaments and the joint capsule. In the late stages of joint disease erosion and irregular jagged surfaces exert pressure on nerves which normally were protected.

It has long been recognized that protective muscle reflexes are always associated with pain. For example, if a nerve to an extremity is stimulated, the flexor muscles contract and the extensor muscles relax. This response is due to the reflex inhibition of the opposing muscle group and is one of the mechanisms responsible for flexion contracture deformities in chronic joint disease. At the knee, for example, chronic inflammation may set up continuous pain stimuli which result in continuous spasm of the flexor muscles and a reflex relaxation of the extensor group, so that if continued long enough flexion contraction may result. The importance of breaking this reflex arc by keeping the patient as free of pain as is possible at all times cannot be overemphasized.

Referred pain in joint disease is worthy of some attention because certain joints give rise to pain in skeletal parts removed from the affected joints and this may lead to improper therapy. Lumbo-sacral and sacro-iliac pathology is commonly accompanied with pain referred to the gluteal region, posterior thigh, posterolateral

calf and lateral border of the foot. The pain of hip joint disease is characteristically felt in the anterior groin, down the inner part of the thigh or in the mesial aspect of the knees. At times hip joint lesions will be overlooked because the patient complains of pain only at the inside of the knee or just beneath the patella.

The recent finding of small inflammatory nodules along the course of peripheral nerves in patients with rheumatoid arthritis by Freund, Price, Steiner and Leichtentritt[2] offers an additional basis for pain, paresthesias and trophic disturbances in these patients. These multiple perineuritic lesions probably act by causing irritation of the sensory nerve fibers.

One of us (C.S.) has studied the relationship of joint pains to various weather changes in twenty arthritic patients. Several of this group claimed the traditional ability to predict weather changes by the increased joint discomfort preceding a rain or a storm, but close observation revealed their predictions to be wholly unreliable. There was no constant relationship between the changes in joint pain and changes in climatic temperature, relative humidity or barometric pressure.

TABLE I. EXAMPLES OF THE DIVERSE NATURE OF DISEASES FREQUENTLY PRESENTING JOINT SYMPTOMS

1. *Common forms of arthritis*
   rheumatoid arthritis
   hypertrophic arthritis
   rheumatic fever
2. *Non-articular rheumatism*
   fibrositis
   periarthritis
   bursitis
   tenosynovitis
3. *Generalized infection*
   meningococcic arthritis
   gonococcic arthritis
   pneumococcic arthritis
   tuberculous arthritis
   brucellosis arthritis
4. *Neuropathic arthritis*
   tabes dorsalis
   syringomyelia
5. *Metabolic arthritis*
   gout
   menopausal
6. *Miscellaneous forms*
   hemophilia
   intermittent hydrathrosis
   scleroderma
   traumatic
   neoplastic
   serum sickness
   ulcerative colitis
   psoriasis

Clinical Problems

From a practical clinical standpoint the management of joint pain can best be accomplished after a specific diagnosis is established. Because of the great variety of conditions having joint symptoms at one time in the course of the disease a careful study may be necessary to determine the exact etiology. The accompanying table, which is by no means complete, will serve to emphasize this point.

For an accurate diagnosis it is often of considerable value to obtain a complete description of the pain, including: (1) its localization, (2) the character, (3) whether constant or intermittent, and (4) factors causing exacerbation or relief. By the intelligent interpretation of this information the diagnosis, probable location and character of the lesion may be determined.

The conditions which will be discussed here represent those most commonly met with and for which we have at our disposal satisfactory methods of therapy. It is well to remember that in the management of joint disease the control of pain, although an important part of treatment, is only the control of one symptom and other local and general symptoms should receive equal attention.

Cervical Pain.—The painful stiff neck is frequently a puzzling diagnostic problem which is far too commonly referred to as a "neuritis." The majority of cases of so-called cervical neuritis are due to joint disease and not primarily to any neurological condition. Irritation of nerve roots as they emerge from the spinal canal is frequently produced by impingement of a bony spur or by fibrotic tissue associated with spinal arthritis. The distribution of pain and sensory disturbances varies with the particular nerve root or roots involved. Relief of the acute symptoms usually follow splinting of the neck either with a Thomas collar or with constant head traction using a Sayre's sling. Heat in the form of hot fomentations is helpful in relieving painful muscle spasm.

Shoulder Pain.—Because shoulder pain is a symptom of many local and distal lesions the clinician must be constantly on guard lest he misinterpret the symptoms. Arthritis, fractures, dislocations, muscle and tendon strain or tears, and lesions causing diaphragmatic irritation must

all be considered in the diagnosis and treatment of the painful shoulder. For most rheumatic diseases involving the shoulder, certain principles of therapy have been proven to be of value in the relief of pain and the restoration of motion. During the stage of acute symptoms hot fomentation applied locally offers great relief of pain and muscle spasm and permits freer motion. The shoulder should be put at rest and maintained in a position of abduction and external rotation. Particular stress should be placed on the importance of beginning motion as soon as possible after the acute pain subsides, because adhesions form quickly and a "frozen shoulder" may result. To prevent deformities in the shoulder joint, Joplin and Baer[6] suggest that the patient sleep on a firm bed without a pillow and be taught to lie with his hands clasped beneath his head for short periods several times a day.

Recently Steinbrocker[9] has claimed excellent results with the local infiltration of 1 to 5 c.c. of 2 per cent procaine in oil repeated at three to five-day intervals. The analgesic solution acts to interrupt the sensory reflex arc and in many patients relief of pain is sustained for long intervals after the anesthesia has disappeared. Subacromial bursitis, one of the most common causes of painful shoulders, usually begins with sudden onset of pain most intense at the point of the shoulder. This pain may be so severe that narcotics fail to relieve it. The experience of many investigators has been that the injection of 20 c.c., 2 per cent aqueous procaine into and about the inflamed bursa gives immediate relief.

Extremity Joint Pain.—The joints of the extremities are subject to many types of arthritis and related diseases of which acute rheumatic fever, rheumatoid, hypertrophic and gonococcic arthritis and gout are clinically the most important. The acutely inflamed articulations of rheumatic fever can be easily controlled by putting the patient to bed, protecting the affected extremities by padded splints, applying oil of wintergreen liniment locally and administering large doses of sodium salicylate by mouth.

Throughout the course of rheumatoid arthritis the one symptom most frequently responsible for incapacitation is joint pain. Nevertheless, the systemic nature of this disease must be remembered at all times and treatment must be directed to the patient as a whole rather than to the painful joints alone. There are certain general measures of proven value which all investigators agree constitute the backbone of therapy. Rest, both general and local, efforts to maintain optimum nutrition, physical therapy for the prevention and correction of deformities, and the use of iron for any associated hypochromic anemia are fundamental in the management of this generalized disease. In some cases the removal of diseased tonsils or teeth is advisable. Gold salts, vaccines and vitamin D in massive doses are other measures aimed at arresting the activity of the disease and their use under carefully controlled conditions is advised.

The aim of local measures in the care of rheumatoid arthritic joints is to keep them as free from pain as possible, to prevent flexion deformities and to maintain normal motion. The use of plaster molds gives rest and support during the acutely painful stages and are oftentimes indispensable in the prevention of deformities throughout the course of the disease. These splints may be worn constantly during the acute stage, but should be removed at least once daily to allow motion. Physical therapy in the form of hot poultices, melted paraffin baths, hot and cold contrast baths and baking lamps are comforting, useful aids in the control of joint discomfort, and their frequent home use should be incorporated in the program of therapy.

Hypertrophic arthritis often causes changes in the joints of the extremities and is especially prone to occur in the ankles, knees, hips and the terminal interphalangeal joints of the fingers. In this disease pain may extend for considerable distances into the periarticular tissues. The general measures of treatment are aimed at relieving excessive trauma; reduction of weight in the obese patient may completely relieve the symptoms. The local treatment of the joints with dry heat and massage to increase the blood supply effectively relieves pain.

Gonococcic arthritis is unquestionably less frequent since the introduction of sulfonamide drugs, but it is important to recognize early and adequately treat because crippling deformities can thus be prevented. The gonococcic joint is hyperemic, swollen, hot and exquisitely tender. It has been proven that the use of either sulfanilamide or sulfathiazole in adequate doses (4 to 6 gm. or more per day) until the temperature is normal for forty-eight hours will sterilize an

infected synovial fluid within twenty-four to seventy-two hours. If chemotherapy is unsuccessful fever therapy may be employed. The combination of fever and chemotherapy has been favored by some.

Gout usually causes acute pain in the joints of the extremities, but is usually undiagnosed because most physicians never think of it, or else dismiss it as a disease that is extinct. Gout is not a rare disease, but the recognition of it is rare. In a large percentage of cases its presence can be suspected from the history of repeated attacks of knifelike joint pains limited to one or two joints. Each episode of acute pain is accompanied by swelling, redness and incapacities lasting from three to seven days. The speed of the onset of the pain is a helpful point in diagnosis, for in no other type of arthritis does it develop so abruptly. Usually the painful attacks of gout can be dramatically controlled by the alkaloid colchicine in 1/120 gr. tablets every hour or two hours until 12 to 15 tablets have been administered. This drug is of no value in the control of pain in any other type of joint disease. Until the effect of colchicine is obtained hot or cold compresses and either codeine or morphine may be required for comfort.

Spine and Low Back Pain.—In rheumatoid arthritis of the spine (spondylitis rhizomelique) continuous dull aching pain along the spine, which is increased by motion, coughing, sneezing, or taking a deep breath is characteristic. We have been favorably impressed by the striking improvement which follows roentgen therapy in this one type of arthritis. Treatment is directed over the spine and sacro-iliac joints in divided doses, from 100 to 200 r. at each application. Our results in over forty cases, reported elsewhere,[8] indicate that in fully 80 per cent dramatic relief of pain and stiffness is obtained and in some of the early cases all symptoms are controlled. Hare[4] has reported similar results. Although it is too early to make final evaluation of roentgen therapy, it appears to be of real value in controlling the symptoms in this group of patients.

The number of patients with painful affections of the lower back is astonishingly large and their management is one of the most baffling medical problems. Smith-Peterson[7] differentiates three types of pain resulting from lesions in the lower spine and sacro-iliac joints: local pain, referred pain, and pain due to muscle spasm. In patients with acute low back pain the position of hyperextension obtained either by having the patient lie on his back with a pillow or blanket under the spine, or by having him lie face down will relax the structures and greatly relieve the pain. After four or five days, when the patient is permitted to be ambulatory, protection of the low back by adhesive strapping applied in the position of extension is valuable. Throughout the acute stage additional relief of pain can be obtained by the local application of heat and the use of analgesic drugs.

Summary

Pain is an important factor in incapacitating patients with acute joint disease and in the production of deformities in chronic joint disease. The basis for pain in joint diseases has been discussed and the importance in differential diagnosis has been emphasized. The control of this important symptom constitutes one of the major problems in the treatment of arthritis and allied disorders. Satisfactory analgesia can usually be accomplished by the proper use of rest, splints, drugs, roentgen irradiation therapy and other physical measures.

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MSMS

Transfusion accidents may be better investigated if a few cubic centimeters of the transfusion fluid is left in every bottle for at least twenty-four hours.—W. S. Reveno, in *Detroit Medical News.*

Early Unfavorable Responses to Sulfonamide Derivatives Upon Second Administration

By Leonard M. Folkers, M.D.
East Lansing, Michigan



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Reactions to sulfonamides usually take the form of fever and rash beginning eight or nine days after more or less continuous use of the drugs. Two cases are reported in which sulfonamide-sensitive individuals were given the medication with early reactions of high fever, nausea, vomiting, erythema, petechial hemorrhages and prostration in one and increased malaise and high fever in the other. Increased use of the drugs may result in frequent reactions of this type but careful attention to a past history of sulfonamide therapy will help prevent similar episodes.

■ College health services with large numbers of upper respiratory infections and their complications have offered an excellent ground upon which to observe the good results given by the sulfonamides in treatment as well as an opportunity to observe the unfavorable reactions incident to their use. The liberal use of these drugs over a period of three and one-half years in a clinic averaging 45,000 calls per school year saw occasional unfavorable reactions of the type usually described, *i.e.*, fever and rash appearing after eight or nine days of more or less continuous use of the drugs by mouth. Two recent cases brought out the possibility of early unfavorable reactions, a condition not previously encountered in patients receiving the drug at the clinic for the first time or after having been given a course earlier. Reports of this type of reaction are not numerous, and, judging from the experiences here, the early unfavorable reactions are not nearly so frequent as the rash and fever on the eighth or ninth day. Nelson[1] reports a case of acquired sensitivity to various sulfonamide derivatives and demonstrates the prompt febrile reaction well. The two cases reported now demonstrate similar problems.

Case 1.—E. C., a white man of twenty years, was admitted to the hospital on January 17, 1942, because of an upper respiratory infection which had progressed to a pneumonic condition of the right lung. The day following admission sulfadiazine was started with two doses of thirty grains each at four-hour intervals and followed by fifteen-grain doses at like intervals. An analysis of the temperature curve (Chart 1) showed

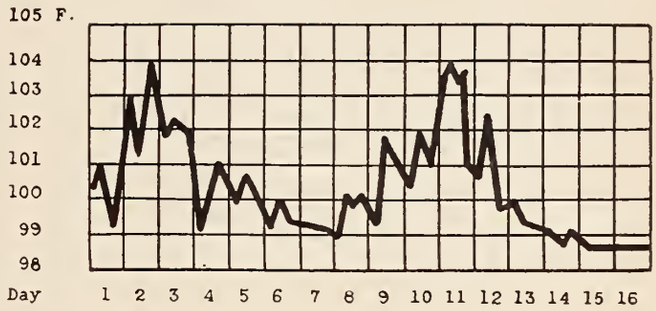


Chart 1. Case 1.

that the admission temperature of 100.4 F. continued to rise until the temperature was 104 F. on the second day at 8:00 p.m. The trend of fever from that time was downward, reaching 99 F. on the eighth day of illness with the clinical course of the pneumonia that of improvement. On the ninth day the fever was elevated again and continued to rise to reach 104 F. on the morning of the eleventh day of illness, when there was severe headache, malaise, nausea, pharyngitis, mental confusion and the appearance of rash over the entire body. The sulfadiazine was stopped and intravenous fluid (3,000 c.c. 5 per cent glucose in saline in twenty-four hours) was given. Edema of the face, hands and feet associated with pruritis was present the following day but the fever began to drop immediately, reaching normal on the fifteenth day. Late on the fourteenth day, without exacerbation of other symptoms or findings, the patient complained of pain and tenderness of the right ear and this progressed to an acute otitis media requiring paracentesis on the fifteenth day. The laboratory findings of this illness showed an admission white blood cell count of 9,600 which decreased to 4,950 on the day of the appearance of the drug rash. Urinalysis throughout the illness was normal.

This same individual was seen in the outclinic one year later, January 16, 1943, at approximately 10:30 a.m. complaining of an upper respiratory infection characterized by moderate pharyngitis, marked postnasal drainage, rhinitis and malaise. There was no fever. Local treatment plus sulfadiazine, grains fifteen every four hours, was instituted and the first dose of this drug was taken at approximately 11:00 a.m. The patient became ill at work about one hour later, developing nausea, vomiting and pronounced weakness. On admission to the hospital at 2:20 p.m. these symptoms persisted and in addition a fever of 102.4 F. was illness with the clinical course of the pneumonia that of improvement. On the ninth day the fever was elevated again and continued to rise to reach 104 F. on found (Chart 2). An hour later the skin over the entire body was flushed and the pharyngitis appeared much worse. The extreme exhaustion was a very prominent feature. Intravenous fluids and codiene gave

some benefit by decreasing nausea and restlessness. Vomiting continued intermittently and the fever remained high. Because scarlet fever was not completely eliminated as a diagnosis and because the history of previous sensitivity to sulfadiazine had not been obtained, the continued use of that drug was deemed advisable. Fifteen-grain doses every four hours were continued. Nausea prevented retention of any of the drug until 1:00 a.m., approximately twelve hours after admission. Four hours later the medicine was refused because of nausea but thereafter, each four hours fifteen grains were taken with a total of 135 grains being accepted over a period of approximately forty hours, at the end of which time the blood sulfadiazine level was 7.84 mgms. per 100 c.c. Throughout this entire period the patient remained very toxic, being listless, occasionally disoriented and having fever of 103 F. Vomiting persisted. The skin and mucous membrane flush became more severe, being most prominent on the chest, the under surfaces of the arms and in the throat. Forty hours after admission edema of the extremities developed, later involving the eyelids. (6,000 c.c. 5 per cent glucose in saline intravenously during this period.) At this time petechial hemorrhages began to appear through the flush. Within twelve hours of the discontinuance of the sulfadiazine the general condition of the patient had improved remarkably. The temperature dropped to 101 F. and reached normal at about midnight on the fourth day of illness, approximately thirty-six hours after the drug had been discontinued. Except for a continued severe pharyngitis and the appearance of ulcerations of the mucous membrane of the mouth the recovery was uneventful and the patient was discharged on the twelfth day. On admission there was a white blood cell count of 11,350. Succeeding days showed decreases to 8,650 and 6,900, respectively. The original urinalysis was normal but a sample on the third and fourth days of illness gave albumin and many red and white blood cells. Thereafter it was normal. A chest radiograph showed a normal condition.

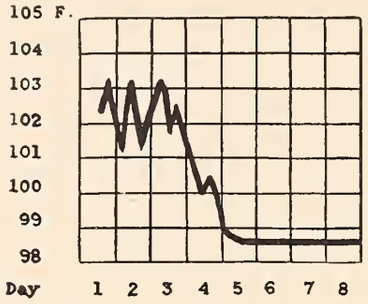


Chart 2. Case 1.

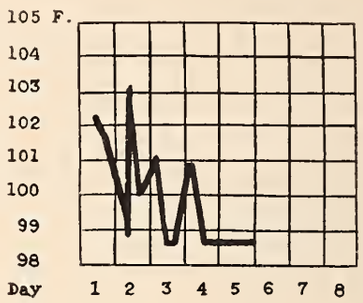


Chart 3. Case 2.

Case 2.—M. W., a white woman of about eighteen years, was admitted to the hospital in December, 1942, for the treatment of an upper respiratory infection characterized by severe pharyngitis, bronchitis, fever of 102 F. and malaise. In addition to local measures sulfadiazine, grains thirty, every four hours for two doses followed by grains fifteen at similar intervals, was prescribed. Within eighteen hours after the first dose of the drug a generalized rash over the trunk appeared and with the removal of the drug the rash disappeared within another 24 hours. Without any fever exacerbation the recovery was uneventful. In connection with this illness an admission white blood cell count of 7,550 decreased to 5,750 on the third day of illness. The urine was always normal.

This same individual was admitted to the hospital the evening of February 11, 1943, because of a similar illness, with a fever of 102.2 F. Conservative measures reduced the fever to 100 F. (Chart 3) the following morning, but the pharyngitis was becoming worse. Unaware of her sensitivity, a physician ordered sulfadiazine, grains fifteen, given every four hours. This was started at 10:00 a.m. on the second day of illness. Two hours later the patient complained of increased malaise and headache though the fever was only 98.8 F. Another dose of sulfadiazine was given at 2:00 p.m. At 3:30 p.m. the fever was 103.2 F. Questioning revealed the story of sensitivity; the drug was promptly withdrawn and, though the general discomfort persisted throughout the night, the patient was much better the following day. No rash appeared. The fever gradually subsided and the patient was discharged on the fifth day. In connection with this illness the white blood cell count was 6,800 and the urinalysis normal.

Comment

Acquired sensitivity to sulfadiazine used in the treatment of upper respiratory infections in both these individuals undoubtedly was the cause of the unfavorable response to the drug in each patient. Case one presented the typical picture of fever and rash on the seventh and eighth days after the original use of the drug. One year later the re-administration of the same drug produced an immediate unfavorable reaction with symptoms of prostration added to the characteristic phenomena.

Case two presented rapidly appearing unfavorable responses to sulfadiazine on two occasions,

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President's Page



Another Year

As we begin another year in the life of the Michigan State Medical Society, I want to send greetings to the 1851 medical men of Michigan who are now in our armed forces. I want you to know that we are thinking of you, and our fervent prayers are that this global war will soon terminate in victory for us. Then you can return to your homes and loved ones and again join your friends in the State Medical Society.

To the members who remain in Michigan and who are doing double duty at present. I extend my greetings. My thoughts are of you and I wonder if you are taking a careful inventory of your own health. Do you, yourself, have periodical physical health examinations? Are you getting sufficient rest? Do you regularly get away from the strenuous practice of today and seek a little recreation? These things you owe not only to yourself and family, but to your patients as well. By checking our own health and keeping physically fit, we can best serve our country.

C. R. Keyport

President, Michigan State Medical Society

EDITORIAL

THEY NEVER SLEEP

■ There is a war to be won. No one knows that better than the medical profession. No profession has been called upon for greater sacrifices, and none has responded more generously. While this great task is being carried out we must allow nothing to stand in the way of its accomplishment. This means that not only must we care for the soldiers and sailors, the men in uniform in every part of the world and give them the best care that is known, but we must also give the same case to those left at home, the civilians, the war workers, the families of those doing our fighting. This we are ready to do, and are doing. One-third of our doctors are now in service, and more are being called. Those doctors of medicine who have been left at home are working as never before to do their own work and that of their fellows who are away.

But while doing this tremendous service we are being faced with a threat to our very existence as we know the practice of medicine. While the war efforts are taking our time and last morsel of strength, there are people who wish to change the ways of the world. This program has been threatening for some time, but NOW seems to be an opportune time to do something. The Wagner-Murray-Dingell bill has been introduced into Congress to take over the practice of medicine, and to run it by bureaucrats, administrators, lame ducks, social workers, planners for the future. The people will be relieved of all their cares, including the choice of their own physician and the arranging with him for his services which is an American right not all wish to lose. This program is set up as a great social service that some paternalistic administration is to dole out to the needy, public, under the guise of Social Security, and at the cost of the government, but which will take untold percentages from all our incomes.

Will the doctors calmly submit to this invasion of their time-honored way of practice? Will the government be able to take over the practice of medicine as set forth in Senate Bill 1161? This can be determined by a little flier in paternalistic practices, which again may be done under the guise of altruistic service. Maternity and infant care service can be given to the wives of men in the military services. No one will object to that care, in fact it should be made available to these men and their wives. This service was planned and made available through grants from the Children's Bureau of the Department of Labor. It was an attractive gesture, and many of our doctors accepted it because this was a means of getting some pay for a service to wives of soldiers, sailors, marines and coastguardmen, some of whom may not be able to pay anything except bare subsistance with the salaries they are able to earn in the military services. The Government called them to duty, but made no provision for this added expense. It was a just and proper help to give, but the method of giving was ideally designed to test the possibility of the government invading the practice of medicine, and taking it over for administration by bureaucrats, administrators, and others interested in furthering paternalistic social service.

If this invasion of the practice of medicine can be carried out successfully, a good first step will have been made to make the Wagner-Murray-Dingell Bill more easily workable. If we accept a first invasion of our rights we will be in very much poorer position to resist a further invasion, and then a complete taking over of the practice of medicine. *Other nations have gone through this socialization of their governmental structure and have found the most effective method of accomplishing that end has been through medical service to the people. History shows it always has been the FIRST step to general socialism.*

The method of procedure is insidious. Publicity is secured concerning the need for medical services (especially to the needy wives of our men in the military services), a need that strikes at the very heart strings of us all. But if the doctors ask some consideration in the planning of this service with which they heartily sympathize, they are accused of obstructing the war effort. Michigan's doctors of medicine have made a very workable suggestion to carry out this service in a truly American way, that is, to give these women a subsidy that they can use for their

own care, but this is not even considered by the bureau in charge because "some of these women might not use this money to pay their doctors." The Doctors do not need a subsidy for this work. They would be glad to be paid for their services, but are willing to make their arrangements with their patients the same as they are doing in all the rest of their practice. They do not need or want a bureaucrat between them and their patient, asking questions their patients have a right to consider as personal and privileged. The American method of practice had been acceptable, and has given us the most healthy nation, the lowest mortality rates in the world.

This project has been accepted by some of our states, and rejected by others. The House of Delegates of the American Medical Association rejected it, suggesting an alternate and a workable plan. Now we are hearing rumblings of criticism against the medical profession. *"They are obstructing the war effort!"* Some national organizations that have the ear of the public are whispering that the doctors are not coöperating to win the war. This summer at a meeting of a medical society of Michigan, a Regular Army Colonel, Medical Corps, refusing to be quoted, and saying he was speaking off the record, said this plan was approved and being put into operation by a department of the government, and that was all he wanted to know; it was not his function to question the measure, but the doctors better accept it or otherwise they would place themselves in the position of obstructing progress and the war effort.

No group more than the medical profession wants to win this war and get back to a normal life. Those in the services want to come home, and those at home want them back to take over part of the home front task that is now probably much more exacting and taking a bigger toll of those engaged than the military services. In saying that, we speak from experience. During the period of stress we are exerting every effort of which we are capable to win the war and the peace. And important is the winning of the peace. It is not disloyal to strive to preserve for the American people the plan of medical services and distribution that has placed America where she is in health and mortality matters. No other philosophy of medical practice has ever produced such a healthy nation. We believe in what we have. We know there are adjustments that should be made and we are making them. A medical evolution is now in process. Michigan has been a leader in prepayment medical services, and now many states are evolving such plans. The Beveridge Plan of England saw some advantages in coöperative plans that have been tried, but the Delano plan of America sees nothing good in anything not sponsored by the government. The Wagner-Murray-Dingell bill will pay the doctors of medicine $600,000,000.00 for taking care of the people, and will pay laymen, bureaucrats, lame ducks, politicians one dollar for every dollar paid to the doctors to supervise those doctors.

All these plans and schemes to take control of medical practice and the medical profession are pointed to destroy the private practice of medicine in the United States. *They shall not pass!* There is no more important effort for us to make. We must talk to our patients, to the public. We must mould public opinion which some are trying to prejudice against us. We must VOTE. We must if necessary, play politics, as our detractors are doing, and prove to the public that American medicine is a friend, has been a most worthy friend, and will be hamstrung and thwarted if placed under such hampering restrictions as now threaten. This is not a job for "George," but for YOU. We must all, every one of us, do our utmost to stay this recurring menace.

Federal bureaucracy must be curbed before democracy is killed in our beloved "land of the free." The invaders of state rights must be cast out.

POSTGRADUATE MEDICAL TRAINING

■ There have been so many rapid advancements in methods of raising an army, training it, and providing for the future that, in spite of the great disruption of all civilian and all normal life programs, there have been many things done from which we will receive definite and profound benefits. The training of doctors is one instance. The method of selection for entrance into practice has yet to prove itself, but the training of young doctors, and older ones after they have been commissioned in the armed forces is to be commended. A great number have been sent to special schools and given very substantial and very valuable training, in surgery, medicine, aviation medicine, tropical diseases and many

other special skills that will be necessary to render the very best possible care to the military; and any service that is now valuable to the armed forces will later have its value in private practice. In the other war a great many of our doctors came out of the experience much better doctors, and the advantages of schooling, and postgraduate study were quite limited. This time those advantages are liberally distributed.

The Michigan State Medical Society is also making plans to further opportunities and facilities for postgraduate medical education in an effort to rehabilitate these men in general medical advances, some of which they will have missed in the service.

BUY WAR BONDS

The third war loan drive is on. It is not necessary to ask our members to buy WAR bonds. We all recognize the need for funds to prosecute the war, and have been buying bonds, but another reminder is not out of order. Taking a hint from another great organization why not, while we are buying bonds, get one for the Michigan State Medical Society Foundation for Postgraduate Medical Education? The Diocese of Lansing, of the Catholic Church, has suggested that its members have a bond made out to themselves and the Bishop of the Diocese, and send that bond to the diocesan headquarters. It is a good suggestion, and could be copied to advantage by our members. That would help furnish funds for the war, and later a contribution to the Postgraduate program.

EARLY UNFAVORABLE RESPONSES TO SULFONAMIDE DERIVATIVES UPON SECOND ADMINISTRATION

(Continued from Page 824)

one taking the form of the rash, the other producing a high fever within a short interval after the administration of the drug.

If experience shows that unfavorable responses to the sulfonamides have any increased tendency to occur rapidly after the administration of the drugs in a sensitive individual, then reëmphasis must be placed upon two precautions originally brought to the attention of the medical profession when the drugs were first introduced. (1) Careful inquiry regarding the previous use of a sulfonamide or an unfavorable reaction to the drug must be made before re-administration of a similar drug. (2) Sulfonamides are best given to patients confined to bed, preferably in hospitals under adequate supervision. To permit patients to suffer added days of incapacity as a result of drug therapy is inadvisable in a nation requiring all available manpower. Likewise, if prostration is to be a prominent symptom in the cases responding unfavorably, then patients must be warned to remain away from active machinery and the like as long as the possibility exists.

A decrease in the white blood cell level accompanied the unfavorable responses in both reported cases and would seem to be a valuable guide to the anticipation of later trouble. If this significant decrease be found regularly during the original course of therapy, even though other symptoms of toxicity do not develop, sulfonamides might be better withheld in the treatment of most later conditions.

Edema of parts of the body was a finding in both episodes in Case one. Remaining to be solved is the question of whether this was a feature of the response in a highly sensitized individual or was the result of a body chemistry disturbed by vomiting and intravenous fluids. On neither occasion was the fluid intake excessive and, though kidney irritation did exist during the second illness, it was of short duration.

Summary

Two cases of an immediate unfavorable response to sulfadiazine therapy in individuals previously having demonstrated a sensitivity to the drug are reported. The liberal use of sulfonamide drugs in therapy of many ailments makes it likely that the responses of this type will increase in number. Careful attention to a past history of sulfonamide therapy will help prevent similar episodes.

Reference

1. Nelson, Jack: Acquired sensitivity to sulfonamide drugs. Jour. A.M.A., 119:560, (June 13) 1942.

MSMS

Restoration of gray hair to its natural color by vitamins has failed in humans, judging by the absence of significant change in hair color in seventeen of nineteen elderly people subjected to intensive treatment for eight consecutive months.—W. S. Reveno, in *Detroit Medical News*.

MEDICAL AND HOSPITAL EXECUTIVES OF MICHIGAN MEET

Unprecedented in the history of Michigan was the joint meeting of executives of the Michigan State Medical Society and the Michigan Hospital Association held on July 17. An important program of joint activity and endeavor, to which officers of Michigan Hospital Service and Michigan Medical Service also subscribed, was outlined by spokesmen and referred to a Joint Committee created as a result of the meeting. Such a harmonious joining of forces, to solve mutual problems, will attain positive good for both professions and for the public which they serve. The movement which had its beginnings in Michigan in July is being watched with interest by a number of other States, with a view to emulating this progressive step.



Left to Right (Seated)—A. H. Miller, M.D., Gladstone; J. C. Ketcham, Detroit; R. S. Huston, Flint; O. O. Beck, M.D., Birmingham; O. D. Stryker, M.D., Fremont; R. S. Morrish, M.D., Flint; D. W. Myers, M.D., Ann Arbor; President C. R. Keyport, M.D., Grayling; C. E. Umphrey, M.D., Detroit;
(Standing)—T. E. DeGurse, M.D., Marine City; R. G. Greve, Ann Arbor; E. F. Sladek, M.D., Traverse City; Wilfrid Haughey, M.D., Battle Creek; W. H. Huron, M.D., Iron Mountain; J. R. Mannix, Detroit; Graham Davis, Battle Creek; W. J. Griffin, LL.B., Detroit; V. M. Moore, M.D., Grand Rapids; L. Fernald Foster, M.D., Bay City; L. V. Ragsdale, M.D., Grand Rapids; P. L. Ledwidge, M.D., Detroit; W. A. Hyland, M.D., Grand Rapids; W. E. Barstow, M.D., St. Louis; and A. S. Brunk, M.D., Detroit.
President H. H. Cummings, M.D., Ann Arbor; and Councilors R. J. Hubbell, M.D., Kalamazoo; R. C. Perkins, M.D., Bay City; and P. A. Riley, M.D., Jackson, were not present when the photograph was taken.

The minutes of the Council of the Michigan State Medical Society graphically describe the momentous joint session of July 17:

MSMS Council Chairman Brunk introduced L. V. Ragsdale, M.D., Michigan Hospital Association President, who in turn presented Graham Davis, immediate Past-President; R. G. Greve, Secretary; R. S. Huston of the Board; J. C. Ketcham, Executive Vice President of Michigan Medical Service; W. J. Griffin, President, and J. R. Mannix, Director, Michigan Hospital Service.

M.H.A. President Ragsdale thanked Dr. Brunk for arranging this meeting of the Hospital group with the Council. He stated that for some time he had felt that the Michigan Hospital Association needed the help and advice of the Michigan State Medical Society. Further he thought that the advice and support of the Michigan Hospital Association could be of help to the Michigan State Medical Society. He stated that the proposed changes in the Federal Social Security Act to include hospital benefits would destroy our present volunteer hospital system and would sound the death knell to our Blue Cross plans. The Hospital group needs the help of the Medical Society in converting such legislation.

Dr. Ragsdale stated that there would be a need of full utilization of our existing hospital facilities for an expansion of our graduate teaching program during the immediate postwar period. More residencies must be provided for the younger physicians who were called into service as soon as they completed their one-year rotating internship. Many older staff men in the service must be provided with graduate courses to prepare them for reëntering civilian practice. Our Hospital Association can and should help with this program. He cited the Bureau of Maternal and Child Health program as an example in which coöperative action would be of great value.

He stated that the Medical Society could be of great help in the Hospital Survey which the Michigan Hospital Association is undertaking this year, and the Michigan Hospital Licensing Law which the Hospital Association hopes to sponsor at the next session of the Legislature. Dr. Ragsdale ended by saying, "These are only a few examples of problems in which the two organizations are mutually interested. We should pool our efforts in solving these problems and to that end I suggest a Joint Study Committee, composed of members from The Council, Michigan Hospital Association Trustees, Michigan Medical Service and Michigan Hospital Service."

Each of the hospital delegation then was asked to comment and each spoke briefly telling the need of such a Joint Committee.

Graham Davis presented facts on the hospitals of the state, and further amplified the need for a hospital survey and for a hospital licensing law.

Mr. Griffin presented the relationships between the medical and the administrative sides of hospitals.

Mr. Mannix spoke of the work being done by the Public Health League of California; also the dangers and scope of the new Wagner-Murray-Dingell bill, and the need for coöperative activity between the medical and hospital groups.

Mr. Ketcham spoke in behalf of Michigan Medical Service and its progress, and the coöperation it has received from Michigan Hospital Service.

Messrs. Greve and Huston expressed their pleasure at being present at this important joint session.

Dr. Haughey felt there was great need for joint action of the medical and hospital groups, particularly in defeating the Wagner bill and other similar schemes.

President Cummings stressed the value of coöperation and the hope that joint endeavor of the groups represented at this meeting could be instituted at once through the formation of a Joint Study Committee, as recommended by the Michigan Hospital Association through its President Ragsdale.

Motion of Drs. Morrish-Barstow that the formation of a Joint Study Committee be approved (three representatives from the Michigan State Medical Society, three from the Michigan Hospital Association, two from Michigan Hospital Service, and two from Michigan Medical Service) and that three Doctors of Medicine, as Michigan State Medical Society representatives, be appointed to serve on this committee for the purpose of mutual coöperation. Carried unanimously. Committee: A. S. Brunk, M.D., W. E. Barstow, M.D., and C. E. Umphrey, M.D.

The representatives of the Michigan Hospital Association, Michigan Hospital Service and Michigan Medical Service were thanked for their attendance at the Council meeting.

WHO MAY PRESCRIBE DRUGS

Osteopaths have no general right to administer or prescribe drugs for internal human medication.

The right to administer drugs does not come within the definition of chiropractic.

The above clear-cut opinion was handed down by Herbert J. Rushton, Attorney General of Michigan, on September 16, 1943. The complete text of the Attorney General's opinion, addressed to the Office of Price Administration, Detroit District Office, Attention of Harlan P. Cristy, Chief Rationing Attorney, follows:

We have your inquiry as to what persons are licensed by the law of this state to prescribe drugs for internal human medication.

You assume, and correctly so, that the license to practice medicine and surgery would authorize the holder to prescribe all drugs for internal human medication. You include "homeopaths" in your list of those engaged in the various branches of the healing arts. The homeopathic theory of medicine is embraced within the general Medical Act of this State and those who follow the theory of homeopathic medicine are accorded all the privileges provided in the act in relation to the practice of medicine.

In Michigan the licenses to practice the various branches of the healing arts are confined to the practice of medicine, osteopathy, and chiropractic. There is also provision in the Medical Act for the issuance of a license to so-called "drugless practitioners" who of course do not have the right to administer medicine. There is no license provided in our law for the practice of "naturopathy." There are of course those engaged in limited fields of healing such as chiropodists and optometrists. Neither of these groups may administer medicine for internal use. I might add that the practice of nursing does not authorize the licensee to administer drugs except under the supervision and direction of a physician.

As to the practice of chiropractic, Section 6 of the Chiropractic Act, Act 145, P.A. 1933, defines chiropractic as:

"Sec. 6. The license provided for in this act shall entitle the holder thereof to practice chiropractic in the State of Michigan, and for the purpose of this act chiropractic is defined as 'the locating of misaligned or displaced vertebræ of the human spine, the procedure preparatory to and the adjustment by hand of such misaligned or displaced vertebræ and surrounding bones and tissues.'"

The right to administer drugs does not come within the definition of chiropractic.

Osteopaths have no general right to administer or prescribe drugs for internal human medication but they may administer narcotic drugs for temporary relief of pain.

Very truly yours,

HERBERT J. RUSHTON
Attorney General

JOHN R. DETHMERS
Chief of Assistant Attorney General

TUBERCULOSIS CASE FINDING

Because of the war and the anticipated increase in tuberculosis incident to it, the physician must be more than ever vigilant and on the alert to spot cases of tuberculosis among his patients and in the area of his practice. To help the physician be alert in this task, the Tuberculosis Control Committee has condensed information and instructions on the attached card. Keep it on the office desk for handy reference.

1. The burden of case finding rests with the General Practitioner. Suspect tuberculosis in all uncertain cases.
2. Tuberculosis spreads from persons having the disease. Prevent spread by hospitalizing all known cases.
3. The diagnosis of tuberculosis in the early, curable stage is imperative. Check all known contacts and all suspects.
4. Diagnosing tuberculosis is not difficult. The *history* provides more clues than the physical examination. (Physical signs and positive sputum are found only in advanced stages). *Tuberculin test* all suspects and *x-ray* the positive reactors, or, when possible, use the x-ray primarily. Positive sputum is conclusive.
5. All NEW cases should be considered active until proven otherwise. Send them to an approved sanatorium for a period of observation.
6. Collapse therapy provides the best results in the shortest time. It is most effective in early cases. Hospitalize all cases for the benefit of modern treatment.
7. Education will further decrease tuberculosis deaths—brush up on tuberculosis and help teach people what they should know.

Tuberculin Test

1. OLD TUBERCULIN is distributed free to all physicians by the Michigan Department of Health in "Two Strength" or "Single Strength" dilutions for the Mantoux test and as "Tuberculin Points for the Von Pirquet test. Complete instructions are enclosed with each preparation. Obtain fresh supply from local department of health.
2. P.P.D. (Purified Protein Derivative) Tuberculin is sold in tablet form with vials of buffer solution and instructions for mixing and giving the test.
3. PATCH TEST (Vollmer). Strips of adhesive tape are impregnated with Tuberculin in the end sections with the central part free for control. They are in sterile packages, ready for application to the cleansed skin surface. Instructions accompany each test strip.
4. A Positive Tuberculin Test means that tuberculous infection has occurred but not necessarily that tuberculous disease has developed. It calls for an x-ray examination.

X-ray

1. X-ray examination is the only dependable way of detecting early tuberculosis. It gives reliable information regarding the location, extent and character of the disease and a good idea of the probable response to treatment. It is of definite value in differential diagnosis.
2. Use standard technique in making the exposure.
3. For interpretation, send the film to a Roentgenologist or to an approved tuberculosis hospital.
4. Do not hazard a diagnosis on an unsatisfactory film.
5. Report all diagnosed cases to the Department of Health on forms provided.

Hospitalizing a Case of Tuberculosis

1. There is no substitute for modern treatment in a sanatorium.
2. Most patients cannot afford to go to a private sanatorium. Michigan laws provide modern sanatorium treatment at County and State expense.
3. Contact the County Health Officer, who will arrange for admission of the patient to an approved tuberculosis hospital. (If there is no county health unit, contact the Health Officer, city, village, township, county or district.)
4. Follow the case during hospitalization in preparation for managing it after discharge.
5. Tuberculosis can be eradicated—Diligence on the part of the practicing physician is absolutely essential in this fight.

YOU AND YOUR BUSINESS

QUESTIONS AND ANSWERS PERTAINING TO THE RELEASE OF X-RAY FILMS AND REPORTS

S. W. DONALDSON, M.D.
Ann Arbor, Michigan
and B. R. VANZWALUWENBURG, M.D.
Grand Rapids, Michigan

The ever-increasing importance of diagnostic roentgenology has led to increasingly varied requests to the roentgenologist for release of films or of information derived therefrom. Requests for information come from the patient, from his relatives, and from physicians whom he has consulted in addition to the original referring physician. His lawyers, lawyers of persons who have opposing interests in the case, and osteopaths and chiropractors may also request reports or opportunity to view the films. Proper procedure in the release of information is further obscured if the examination has been made at the request of an insurance company which is financially liable in the case and has paid for the examination.

Very few court judgments are available as precedents to indicate correct procedure. This discussion is an attempt to determine from general principles as well as from precedent what the probable court action would be in a given situation.

However, the procedure which will satisfy the bare minimum requirements prescribed by law will not be broad enough to provide release of information in all the situations in which such release is in the best interests of the many persons affected. The further attempt is made, therefore, to define those situations in which release of films or reports is advisable although not required by law. It is hoped that the discussion of these principles, concerning which wide disagreement may be expected, will encourage further thought and lead eventually to greater uniformity of practice. There are three principles involved.

The few pertinent court decisions which have so far been made have been based on *principles of contract.* In determining what the implied contract was between roentgenologist and patient, the courts have relied on common practice as a guide. They have established the identity of the roentgenogram and of the roentgenologist's report as medical records. "In a sense they differ little if at all from microscopic slides of tissue made in the course of diagnosing or treating a patient . . . " (McGarry vs. J. A. Mercier Co., 272 Mich. 501, 262 N.W. 296). In general the decisions have ruled that the implied contract between roentgenologist and patient has been fully satisfied when the roentgenologist has made his examination and communicated his finding to the referring physician.

Legal opinion suggests that, in addition to the contractual aspect, a *principle of equity* might be considered—namely that the patient, as the prime interested party, retains an interest in the results of examination in the sense of a right to beneficial use, although not possessing the right of ownership itself. This aspect has not yet to our knowledge been expressed in court opinions regarding roentgenograms or any other form of medical record. The roentgenologist's prime responsibility is, however, to the patient, and the professional principle of doing that which is in the patient's best interests suggests that a right to use of the information, beyond that required by contract, should in many circumstances be granted.

The *principle of privileged communications* is operative, of course, in this as in any other physician-patient relationship.

Questions and Answers

1. Q.—*Mr. A. requests possession of x-ray films of himself. Is it necessary to grant this?*

A.—No. One of the few questions regarding release of films for which court precedent exists is that of ownership. In the case previously quoted of McGarry

(Continued on Page 834)



WHEN INVASION COMES

IN a dim chilly dawn, while thin mists ghost over the sea... grim in invasion barges will be soldiers of freedom... straining for action... steeled for what is to come.

In one of those barges an American man of medicine will crouch, kit open before him checking the vital medicaments that may mean life for those who fall wounded... ready to bring surcease from pain to tomorrow's heroes.

When invasion comes, Ciba Pharmaceutical Products, Inc., and its associated companies will know that in their way they have contributed to the turning of the tide... from barbarism back to honor and compassion for their fellow men. The months of intensive planning, retooling, rescheduling and the long days and nights the employees have cheerfully given to meet military requirements, can then be saluted as a "job well done."

From this invasion dawn to a better, saner world free from ravages of war, Ciba, "MERCHANTS OF LIFE" march on. Their post-war planning is based on intensive research to supply the medical profession with modern medical products for the prevention and control of disease.

MORE THAN A HALF-CENTURY OF METICULOUS, INTELLIGENT RESEARCH AND PRECISE SUPERVISION GUARD EVERY CIBA PRODUCT.

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vs. J. A. Mercier Co. the court ruled that, in the absence of any special agreement to the contrary, ownership of the films remains with the roentgenologist who has made the examination or hospital where it was made.

2. Q.—*Mr. B. requests, for his own use, a copy of the report of an x-ray examination made of himself at the request of his referring physician. Is it necessary or advisable to grant this?*

A.—Court opinion has not as yet ruled on this question. No written contract is as a rule involved. The implied contract under which the examination was made involved only an examination and a report to the physician who referred the patient for roentgenological consultation. Court interpretation of the implied contract would undoubtedly be influenced by common practice in similar situations and it is not, of course, common practice to deliver roentgenological reports directly to the patient.

As a general rule it is not advisable. A committee of members of the American Roentgen Ray Society recommended in 1914 as follows: "That no report should be given to the patient except through the referring physician or surgeon. That patients are sent for consultation and diagnosis and are not entitled to plates or prints. Prints in the hands of patients lead to false interpretations, confusing opinions, multiplicity of advice and bad results."

3. Q.—*Is Mr. C. to be granted opportunity to view his films?*

A.—In general, no. (See answer to question 2.) The opportunity should be granted however, if desired by the referring physician. In some cases discussion of the films with the radiologist will increase the patient's coöperation or morale. In other cases (as in metastatic maligancy or hypochondriasis) it might be very inadvisable. The decision is best left to the referring physician. In special instances, as in clearly demonstrable fractures, the attending physician's assent may be taken for granted and the patient's natural curiosity satisfied.

4. Q.—*Mr. D. has changed physicians. Should the radiologist, at Mr. D.'s request, send a copy of the x-ray report to the new physician and permit him to view the films?*

A.—A recent decision of a California Superior Court ruled that the roentgenologist was "justified in refusing to surrender possession of the x-ray negatives" when the roentgenologist had refused to show the films except on authorization of the referring physician.

It is to be noted, however, that the patient may discharge a physician at any time without explanation and when he discharges the attending physician he does not by doing so discharge all consultants the physician has had in connection with the patient's diagnosis or treatment. The consultant and the patient still remain in a physician-patient relationship. No one can gain by a refusal as it will not improve the relationship between patient and original physician. The patient will certainly gain if the request is granted. Common sense indicates that the patient's right to change physicians would be impugned by refusal to grant this request. Granting this request is apparently not legally mandatory but is considered advisable.

5. Q.—*Should a copy of the report be sent, at Mr. E.'s request, to his lawyer without the referring physician's permission?*

A.—Yes, although according to the California Superior Court decision this also is not legally necessary. The only case in which one of the interested parties might be harmed by such action would be in case the patient were bringing suit against the referring physician. In such a case, if the x-ray evidence were pertinent, the physician could hardly hope to defend himself by keeping this evidence out of court. The legal right of privileged communication is completely in the patient's control and his physician cannot prevent his waiving that right.

6. Q.—*A lawyer representing an insurance company requests opportunity to view Mr. F.'s films. Should this be granted without Mr. F.'s authorization?*

A.—No. The statutory laws of privileged communications require that no information be given out without the patient's permission.

If, on the other hand, the insurance company has paid for the examination the patient may be considered to have given consent to release of information to the company. The Michigan decision indicates that compliance even in this situation is not necessary, the reports to the physician being sufficient to fulfill the contract. As a practical matter, however, failure to make the release, if the insurance company has paid for the examination, is merely obstructive.

7. Q.—*A doctor of medicine engaged by an insurance company which is liable for injuries to Mr. G. has requested an x-ray examination following an accident and the insurance company has paid the roentgenologist's fee. Should a copy of the x-ray report be sent to Mr. G.'s personal physician or lawyer at Mr. G.'s request?*

A.—Yes. Mr. G. is the person primarily concerned in the examination and, in the absence of any agreement to the contrary, has only yielded to the insurance company the right of access to the information derived from x-ray examination. He has not yielded to the company the exclusive right to such information. The courts might rule that such release of information is not necessary. It does not appear that they would rule it improper.

8. Q.—*Should films be released, at Mr. H.'s request, to his chiropractor or osteopath?*

A.—Under contractual law it is not necessary. It would usually be impolitic. Most physicians would consider it unethical.

9. Q.—*Do the statutes pertaining to privileged communications apply to testimony in court?*

A.—Yes. In most instances, however, the patient either by bringing a court action or in some other way, has waived the privilege. Both films and records are subject to subpoena at any time and must be produced when ordered by the court. The question

(Continued on Page 836)

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of their admissibility as evidence under the code of privileged communications is then to be decided by the court.

Summary

Summary of the legal and ethical principles involved in the release of x-ray films and reports:

1. When the consultant roentgenologist has made the examination and sent his report to the referring physician he has completely fulfilled his legal contract.

2. "Films or reports in the hands of patients lead to false interpretation, confusion of opinions, multiplicity of advice and bad results" (American Roentgen Ray Society). It is therefore *in the best interests of the patient* that all reports or opportunity to view films come to him through the referring physician or with his permission.

3. The patient has the right to change physicians and does not automatically discharge consultants in so doing. It is therefore *in the best interests of the patient* that access to the reports and films be given at the patient's request to any physician or other person who has a legitimate interest in the case.

4. No one may be given the right of access to films or reports without the patient's permission.

5. Ownership of the films remains with the roentgenologist.

Rules to be established in a roentgenological office or hospital department to govern the release of films and reports according to these principles: 1. Films and reports shall be shown to patients or relatives only at the request of the referring physician.

2. Regardless of who has paid for the examination, films and reports shall be made available to any physician or other person with a legitimate interest at the patient's request.

3. No one shall be given access to films or reports without the patient's permission.

4. All films remain the property of the roentgenologist. Films loaned shall be accompanied by a request for prompt return.

CURARE

Collier's, August 13, 1943, in an article by J. D. Ratcliff, tells about the development of a new drug, curare, the arrow poison used by the South American Indians. A. E. Bennett of the University of Nebraska did the first work with a refined lotion, and so far the work has been entirely on an experimental basis.

Lengthy research and experiments were required before a pure, standardized curare which, when applied to animals and human beings has a paralyzing effect, was obtained for clinical trials. And, since the clinical work began, it has been discovered that the refined curare can be used to:

1. Paralyze muscles prior to the submitting of patients, suffering from dementia praecox and manic depression, to shock treatments which ordinarily had produced convulsions that frequently led to broken bones.

2. Provide relief—only temporarily because it has no healing qualities—to those afflicted with spastic paralysis.

3. Lessen muscular contractions of intestines during operations for such ailments as hernia, appendicitis or some abdominal obstruction.

Moreover, according to Ratcliff, curare offers promise on treatment of tetanus—lockjaw.

AMERICAN-SOVIET MEDICAL SOCIETY CHAPTER LAUNCHED IN DETROIT

The American-Soviet Medical Society, recently organized to stimulate the exchange of medical information between the United States and the Soviet Union, formally launched its Detroit chapter on Wednesday evening, August 18, at a meeting held at the WWJ auditorium. Professor Vladimir V. Lebedenko of the Department of Surgery at the First Moscow Medical Institute, who is at present in the United States as official representative of the Russian Red Cross, was the chief speaker. He described his experiences with Soviet war medicine and particularly with new methods of treating shock at the front.

Dr. Warren B. Cooksey, head of the Michigan Blood Bank, presided. The gathering was addressed by Dr. Barris, head of the Detroit chapter of the American Red Cross; Dr. Bruce H. Douglas, commissioner of the Detroit Board of Health; a representative of the Wayne County Medical Society; and the executive secetary of the American-Soviet Medical Society.

Professor Lebedenko was the guest of the Detroit chapter of the American Red Cross before the meeting and made visits to various Detroit hospitals during his stay there.

MICHIGAN MEDICAL SERVICE

Michigan Medical Service is becoming a very convincing evidence that such measures as Senate Bill 1161, the Wagner-Murray-Dingell bill, are not needed. Michigan was a pioneer in the attempt to render a prepaid medical service to large groups of citizens. At

first our effort met with a good degree of success, but as we expanded and met with adverse coöperation, and adverse experience we lost. At one time there was an actuarial deficit as high as $540,000.00 At the end of the first year of operation there was a profit of about $30,000.00, which turned in to the deficit mentioned. But during this time Michigan Medical Service was learning the hard way many facts entering into the costs of rendering service to large groups of people, and some readjustments in rates and other plans were made. The deficit began to decline in November, 1942, and by July 1, 1943, when the last audit was conducted by a firm of nationally known auditors this had been reduced $227,000.00 There has been a favorable balance every month for eight months, and estimates made since that date show the same tendency, though final figures are not yet possible to obtain.

Where at first it took over sixty days to pass a payment through the routine of analysis and payment, involving at times the waiting for funds the time now is thirteen days, which approaches the minimum, and there is a bank balance sufficient to pay all claims as soon as they are claims, and there was enough in addition so that a handsome sum was invested in war bonds during the Third War Loan.

Many states are now following the plan of prepaid medical services for groups, and making detailed studies. Quite a number of plans are in operation, and they should be successful, for they have had the experience of Michigan and California to draw upon, and have been able to avoid many of the mistakes that we made in ignorance and innocence. Successful prepayment plans in many of the states will go a long way to point the futility of the Senate bill 1161. Michigan has been commended for its pioneer work.

The *West Virginia Medical Journal* for September reports that the State Board of Health, with the approval of the Children's Bureau of the Department of Labor at Washington in the emergency maternal care program for the care of wives of enlisted men, has fixed a fee of $50.00 for the care during prenatal, labor and puerperium, as against the old rate of $35.00. The delivery is fixed at $35.00, other fees accordingly.

Examination of 2,332 white men revealed that the pot-bellied had, on the average, less pneumonia and cancer, and no more diabetes than the willowy and sylphlike. This does not apply, of course, to extremes. Among those examined, the enormous tended to die early, as did the cadaverous; but a modestly aldermanic girth is quite consistent with long life.—Dr. Raymond Pearl, as quoted in *Southern Medicine and Surgery.*

SENATE BILL 1161

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At the base am I, the lowly doctor, now offering what drugs a Washington official tells me to use, delivering babies according to the manual of instructions that will be prepared, setting bones with the aid of a chart from the Health Service, identifying measles or meningitis by comparing my findings with color photographs of typical cases.

I work eight hours and I rest at night. The doctor on the night shift follows through while I sleep and I shall be content, the legislator tells me, for the government will send me money for my services, as if that solves my fears.

As if that's why I dressed at two this morning to visit the baby with diphtheria, as if that is why I stayed at the hospital all night with the boy who fell from a tree! And the patient too is happy because he pays nothing for this service. It is free except for what he pays the government. The fact that this is many times the amount he ever paid his doctor should not bother him, we hear, because freedom is expensive. Our government will make him free. And me also, they say.—*The Medical* (Wichita, Kansas) *Bulletin.*

RAPID TREATMENT CENTERS FOR SYPHILIS

In order to clarify the policies and responsibilities of the U. S. Public Health Service in the new nation-wide system of Rapid Treatment Centers for persons infected with venereal disease, a special edition of the "VD War Letter," published by the Division of Venereal Diseases of the Public Health Service, was issued last month. It revealed the following facts:

More than thirty Rapid Treatment Centers will be in operation by the end of 1943. Approximately 15,000 infected persons will be admitted to the centers and rendered non-infectious, their disease either arrested or cured, during the war.

The Rapid Treatment Center program is an outgrowth of the national venereal disease control program begun in 1938, and it has been developed jointly by state health departments, the Office of Defense Health and Welfare, the U. S. Public Health Service, and the Federal Works Agency. It is intended to be "a direct and realistic effort to combat a definite wartime threat to our national strength."—*Ohio State Medical Journal,* April, 1943.

Bureau of Census *life tables* show that the average lifetime of rural people is longer than that of urbanites, women longer than men, and whites longer than non-whites.

Say you saw it in the Journal of the Michigan State Medical Society

CORRESPONDENCE

H. H. Cummings, M.D., President
Michigan State Medical Society
Lansing, Michigan

Dear Dr. Cummings:

As Director of the Medical-Research, Health and Accident Division of the UAW-CIO, my attention has been drawn to the number of war production workers who are being swindled out of hard earned monies by advertising clinics, sanitariums and such like which profess to be able to cure everything, but which in reality are nothing but unadulterated fakes.

These people, by their deceit and trickery, are not only leeching on the workers' wages, but in so doing are also damaging our war effort. In these times when the health of the worker is of so much importance to the Nation—when it is imperative that all available manpower be kept physically fit to reduce absenteeism and keep the wheels of industry turning, it is alarming that so much quackery is allowed to openly flourish.

A few examples will emphasize the seriousness and the extent to which this deceit is being carried on.

A worker was recently guaranteed to be cured of hernia by injection treatments for $150.00. After paying $90.00 in advance and receiving one injection, an examination disclosed that the worker had no hernia at all.

Another worker was guaranteed the same cure and after paying $145.00 in advance and receiving a number of treatments, an abscess in the site of the injection developed with the result that the worker was out $145.00 in cash, was not cured of the hernia and in addition had an abscess which would require surgical treatment.

A worker visited another of these advertising clinics, and after a fluoroscopic x-ray without the use of barium, was told he had an ulcer of the stomach as big as a half dollar. This was all done as advertised in the press for the sum of $2.00. After the examination, he was given a bottle of medicine for $2.00 and advised to take a series of 15 treatments for $30.00. The treatments consisted of laying heating pads over the chest, which is certainly not accepted as proper medical treatment for ulcers. Examination later disclosed that the worker had a pathological appendix. In other words, the $2.00 ad was just a come on and the clinic was reaping golden harvest in selling medicine and diathermy treatments. In this particular case, the worker spent $34.00 in cash, lost two months in wages and was simply tricked into thinking that he was being completely cured.

These are just a few examples of the fraud and quackery that are constantly being practiced on the workers in this state.

There has also been a very noticeable increase in

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advertising cure-alls. Particularly is this true in the advertising of trusses for the cure of hernia. In the first place, it is a well-known fact that the use of a truss will never cure a hernia, yet trusses are constantly being advertised for this purpose at the supposedly sacrificial price of $100.00, while a good or better truss than those advertised can be purchased from a reliable business house for only $10.00.

Advertisements proclaiming wonderful results from patent medicines are also on the increase. These medicines are supposed to cure practically everything and especially female disorders, kidney and liver troubles. All of them are ineffective, and the advertising entirely misleading.

It is deplorable that conditions such as we have stated are permitted to exist within this state. We, therefore, request that the Michigan State Medical Society together with the Wayne County Medical Society make comprehensive surveys and take immediate steps to stop the many trick devices that are being used to lure money away from the workers through false pretenses.

We ourselves have decided to establish a special advisory department in the Medical-Research Institute to work along this same line and will do everything possible to warn our membership to beware of patent medicines and medical agencies that resort to advertising to secure business.

Very truly yours,
(Signed) GEO. F. ADDES
International Secretary-Treasurer

July 1, 1943

* * *

George F. Addes
International Secretary-Treasurer
United Automobile—Aircraft—Agricultural
Implement Workers of America (UAW-CIO)
411 W. Milwaukee Ave.
Detroit, Michigan

Dear Mr. Addes:

Thank you for your kind letter of July 1 which I held for presentation to The Council of the Michigan State Medical Society, at its meeting of July 17.

The Council instructed that congratulations be sent to the UAW-CIO on its efforts to stamp out fake clinics, charlatans, and substandard practitioners.

This problem has been fought by the medical profession of Michigan and by the entire medical profession of the country (notably through the Bureau of Investigation of the American Medical Association) for many, many years. We are cognizant of the vast amount of monies wasted on patent medicines, fake clinics, charlatans, and especially on practitioners of healing who are not qualified by education, training or experience to perform the work they so brazenly attempt to do.

We hope that the labor group will continue its fight against all such "cure-all organizations and people," and bring proper information to its hundreds of thousands of members so that the best of medical care—and only the best—will be obtainable by them. In this commendable program, the Michigan State Medical Society offers you its full facilities and sincere help. In addition, it recommends that you enlist the services

Say you saw it in the Journal of the Michigan State Medical Society

of the Michigan State Board of Registration in Medicine and the Michigan Department of Health, both agencies of state government which have police power. Finally, the State Society offers the recommendation that you use your influence with county prosecutors to see that the Medical Practice Act of Michigan as well as the health regulations of the various communities are upheld.

Please call upon the Michigan State Medical Society whenever we may be of any service to you.

Very cordially yours,

H. H. CUMMINGS, M.D., *President,* MSMS

July 20, 1943

Dr. Wilfred Haughey
610 Post Building
Battle Creek, Michigan

Dear Dr. Haughey:

For the past two years I have been a member of the Michigan State Nutrition Defense Committee as a representative of the State Medical Society. At the last meeting in Lansing, September 15, the committee asked if it were possible to give some publicity in the State Medical Journal to National Nutrition Week, which is to be during the first week of November. I do not know who handles such publicity for the state publication and I am therefore addressing this letter to you. I felt that this mode of approach would be more satisfactory than an announcement at the various county society meetings, since it is more likely to reach men who are now too busy to attend meetings.

You will notice that the entire month of November has been designated as National Nutrition Month. The individual states have been instructed to carry on the campaign throughout the month of November, but to choose one week during the month for its most intensive campaign. The State Nutrition Committee has chosen the first week of November but intends to continue with radio programs, newspaper articles, et cetera throughout the entire month.

September 20, 1943

J. W. CONN, M.D.

There is now in process of preparation a Community Mobilization Handbook which will give suggestions about the further organization of the committees and will contain a list of activities the committees can carry on, which may be adapted to suit any type and size of community. Among the suggestions will be the holding of Nutrition "Weeks" or special Nutrition "Days" during November of the type discussed at the Conference of State Nutrition Committee Chairmen, in any locality where the Committees may wish to undertake such an activity. It would be highly desirable to begin development of other plans for participation in Food for Freedom Month based on information in the booklet.

We know that many of you are already participating in the Home Front Pledge Compaign initiated by the Office of Price Administration and that in some places local nutrition committee chairmen are heading up Citizen Committees set up for that purpose.

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Acknowledgment of all books received will be made in this column and this will be deemed by us as a full compensation of those sending them. A selection will be made for review, as expedient.

REHABILITATION OF THE WAR INJURED, A SYMPOSIUM. Edited by William Brown Doherty, M.D., and Dagobert D. Runes, Ph.D. Illustrated. New York: Philosophical Library, Inc., 1943. Price $10.00.

A significant start in the rehabilitation of the injured of the war is described in this book. The head injuries are probably first considered in estimating what the problems are to be, but that is only a small part. There are injuries of every part and tissue, and they are pretty well all considered in this book. Many authors and many subjects are listed in a two-page table of contents. Neurological psychiatry, reconstructive plastic surgery, orthopedic care are covered in detail. Hints are given on the methods of amputations so as not to have much shock and many bad stumps. Burns and their treatment, and jaw reconstruction are only a few topics. Physiotherapy, occupational therapy, vocational guidance, and legal problems receive full consideration, and each topic by an expert in that particular subject. Survivors of shipwreck with their vascular and neurologic lesions are discussed by Commander James White. There are 684 pages of real meat for those interested in this subject, and that includes not only those who will be working in the rehabilitation of the war injured, but civil injuries will produce just as intricate cases, and those are deserving and requiring just as much knowledge and skill in their handling. The type is of good size, the paper not too glossy, or thin, yet the book is not too big for reading. The style is that of the fifty-seven contributors, but is clear and readable.

METHODS OF TREATMENT. By Logan Clendening, M.D., Clinical Professor of Medicine, Medical Department University of Kansas, and Edward H. Hashinger, A.B., M.D., Clinical Professor of Medicine Medical Department, University of Kansas; with chapters on special subjects by twelve others. Eighth Edition. St. Louis: The C. V. Mosby Company, 1943. Price $10.00.

All the methods of treatment in internal medicine are given in outline in this book. In it are collected material and details from many services, widely scattered, which helps the student or practitioner to decide what treatment to use in any given condition, and exactly how to use it. Hypodermic and intramuscular or intravenous injections are described, and complete procedures outlined. One hundred and seventy-six pages are devoted to drugs, their actions and indications, as well as methods of administration.

The article on anesthesia by Prof. Lorhan is a thorough treatise of fifty-six pages, discussing local and general, spinal and rectal anesthesia; all ten types of agents and their use and control.

Diet and infant feedings, physical methods, hydrotherapy and psychotherapy are all elaborately outlined, after which the last half of the book deals with specific disease conditions and groups. The authors discuss methods of treatment and the reasons, and specu-

late on results. This is a book of 1033 pages, well and clearly printed in good sized type, spaced for easy reading, and on non-gloss paper.

RECONSTRUCTIVE SURGERY OF THE EYELIDS. By Wendall L. Hughes, M.D., F.A.C.S., Hempstead, New York. Illustrated. St. Louis: The C. V. Mosby Company, 1943. Price $4.00.

The repair or reconstruction of the eyelids for correction of civil or war injuries is the text for this monograph written as a thesis for admission to the American Ophthalmological Society. The history of plastic surgery of the eyelids is traced with numerous illustrations of methods and results. The first chapter covers the history and development of skin grafting. Grafting without a pedicle, variations of the pedicle grafts, and general considerations regarding grafting constitute the first half of the book. Reconstruction of the conjunctiva, reconstruction of the tarsus, and transplantation of the cilia and other lid structures are well covered and illustrated. The balance of the book is a very clear exposition of the author's own method of blepharopoiesis. Cases are illustrated, and a complete reference list is given covering 451 references. The book is very well written, and nicely presented. It is worth while.

ROENTGENOGRAPHIC TECHNIQUE. A manual for physicians, students and technicians. By Darmon Artelle Rhinehart, A.M., M.D., F.A.C.R. Professor of Roentgenology and applied Anatomy, School of Medicine, University of Arkansas; Roentgenologist to St. Vincent's Infirmary, Missouri Pacific Hospital, and the Arkansas Children's Hospital, Little Rock, Arkansas; Trustee, American Registry of X-Ray Technicians. Third Edition, Thoroughly Revised. 471 pages. Illustrated with 201 engravings. Philadelphia: Lea & Febiger, 1943. Price $5.50.

The third edition of a technical book is testimony of its value. This edition has allowed a thorough modernization of the text material. New techniques and new methods have been generously incorporated, and considerable new material added. The book is not too technical, bearing in mind the use by x-ray technicians, medical students, and practitioners who work for themselves and their colleagues. Emphasis is placed on the methods of developing a technique suitable to the office and conditions under which the practitioner will work, and considering his equipment. The basic principles of electricity and x-rays are given, with a thorough explanation of the tubes, instruments and office arrangement, and practices. Simple techniques are given for most of the body parts that are to be rayed, with pictures, and good descriptions. Many of the pictures are dual, one showing the position for taking the picture, and the other the x-ray obtained. The position of the tube is illustrated, with a description giving the exact details of arrangements and technique. The author advises experimentation to determine amount of exposure, and confidence in the procedure. It is a valuable guide, well printed.

THE GENEALOGY OF GYNAECOLOGY. History of the development of Gynaecology throughout the ages. 2000 B.C. —1800 A.D. With excerpts from many authors who have contributed to the various phases of the subject. By James V. Ricci, A.B., M.D. Associate Clinical Professor of Gynaecology and Obstetrics, New York Medical College, Director



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of Gynaecology of the City Hospital, New York, etc. Department of Gynaecology and Obstetrics of the City Hospital, New York. Philadelphia: The Blakiston Company, 1943. Price $8.50.

This is a beautiful sample of the printer's art, a book of 578 pages, large type, easily readable. The author has done a tremendous piece of research and has presented a study of the earliest knowledge of female disease, picturing prehistoric knowledge, the Egyptian papyrus, Babylonian, Assyrian, Hindu and Biblical literature. The quotations are extensive, and each chapter is followed by a voluminous bibliography. There are seven ancient Egyptian papyri, on medical subjects, but the Kahun papyrus deals especially with gynaecology. The Griffith deciphering is given in full. The Vedas are quoted. These, with the Biblical writings antidate Hippocrates by roughly eight hundred years. The gynaecological practices down the ages are given, with comments and quotations. Two pages of twenty plates each show the vaginal speculæ used from 49 A.D. in Rome to 1821. There are fifty-four illustrations of great interest as historical studies. To the student of medical history, this book is invaluable, and to the gynaecologist with a yen for knowledge of his subject, it is a gold mine. Throughout the text there are many beautiful quotations chosen from the masters through the ages, which add charm and meaning to the gynaecological items culled from the past.

AN INTRODUCTION TO SOCIOLOGY AND SOCIAL PROBLEMS. A Textbook for Nurses. By Deborah MacLurg Jensen, R.N., B.Sc., M.A., Instructor in Sociology and Social Problems at Schools of Nursing of St. Louis City Hospital and St. Luke's Hospital; Lecturer in Nursing Education, Washington University. Illustrated. Second Edition. St. Louis. The C. V. Mosby Company, 1943. Price $3.25.

Sociology and social problems are courses of study and practice taking the efforts of many nurses who are entering special fields of work, and must have special preparation. This textbook is a systematic exposition of the subject, suitable for the nurse, but also for any individual especially concerned with sociological contacts, the doctor of medicine, and the social workers in general. The development of the family, with its various interests, contacts, and conditions from the earliest times to the present, is described. Community organizations, social problems due to divorce, maternity, sex behavior, unemployment and child welfare are discussed at length, and very sane discussions and solutions are offered. This is a worthwhile book.

THE BOY SEX OFFENDER AND HIS LATER CAREER. By Lewis J. Doshay, M.D., Ph.D., Psychiatrist Children's Courts, New York City. Formerly Senior Assistant Physician Manhattan State Hospital, New York; etc. Foreword by George W. Henry, M.D., Associate Professor of Clinical Psychiatry, Cornell University Medical College. New York: Grune & Stratton, 1943. Price $3.50.

The significance of early sex offenses in relation to later life behavior is studied in relation to 256 juvenile sexual cases treated at the New York City Children's Court Clinics and followed for a period of six years after the last treatment. The background of the delinquent, the family and home factors, personalities of the parents, age of delinquent, color, intelligence, physical disorders are all studied. Types of offenses have a bearing on future offenses. Many case histories are

given illustrating successes and failures. This is the first study so far attempted on this subject. From statistical analyses and the case histories there is evidence that adult general offenses stand in direct continuity with juvenile general offenses. On the other hand, it is patent that juvenile offenses *per se,* do not mar the personality of the individual, nor condition him to later general antisocial behavior. The whole study is very interesting. Many preventive suggestions are made, and tables given.

COLLECTED PAPERS OF THE MAYO CLINIC AND THE MAYO FOUNDATION. Edited by Richard M. Hewitt, B.A., M.A., M.D.; A. B. Nevling, M.D.; John R. Miner, B.A., Sc.D.; James R. Eckman, A.B.; and M. Katharine Smith, B.A. Volume XXXIV—1942. 999 pages with 176 illustrations. Philadelphia and London: W. B. Saunders Company, 1943. Price $11.00.

The 1942 edition of the collected papers of the Mayo Clinic is volume thirty-four, and is fully up to the high standard set so many years ago. Five hundred and thirteen papers are used to make up this volume; one hundred and thirty-seven from the staff meetings of the clinic, and others appearing in various places. This year two are copied from THE JOURNAL of the Michigan State Medical Society. These papers cover every field of the practice of medicine, and are grouped in their presentation. Recent advances in chemotherapy, the alimentary tract, genito-urinary organs, ductless glands, blood and circulatory organs, skin and syphilis, head, trunk and extremities, chest, brain, spinal cord and nerves, radiology and physical medicine, anesthesia and gas therapy gives one a comprehension of the scope of the collection. There is also a miscellaneous section. Seventy-seven of these papers are complete. The type is large, clear, and the paper not too glossy for easy reading.

INJURIES OF THE SKULL, BRAIN AND SPINAL CORD. Neuro-psychiatric, Surgical and Medico-legal Aspects. By Samuel Brock, M.D., New York University. Second edition. Baltimore: The Williams and Wilkins Company, 1943. Price $7.00.

This is a new, enlarged edition of a well-known and most useful text, written by twenty-three specialists in this field. A most comprehensive volume, this book will serve the specialist as well as the practitioner who cannot find consultant experts in the present-day physician shortage on the home front.

All degrees of head injuries are covered in detail. The work on acute and chronic subdural hematoma is particularly good. Operative technique is dealt with in a most understanding manner. The mortality of gunshot wounds of the brain has been cut from 50-60 to 28.5 per cent in the present war, using sulfanilamide powder (the choice of the sulfonamides) and azochloramide irrigation. Observations from Pearl Harbor head wounds reveal less unconsciousness due to the increased velocity of missiles now used. Vitallium and ticonium plates have been added to the list of preferred materials for skull defects.

Acute effects of cerebral birth injuries and their sequelæ account for at least one-third of the deaths within the first two weeks of life. The use of electroencephalography in diagnosis and in estimation of the

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prognosis of posttraumatic convulsive and allied states is discussed.

Neuroses, malingering, roentgenological aspects of skull injuries, general pathological considerations in injuries of the spinal cord and the medico-legal aspects of injuries of the skull, brain and spinal cord are taken up in detail. The industrial surgeon will find this a necessary addition to his library.

MANUAL OF FRACTURES. TREATMENT OF EXTERNAL SKELETAL FIXATION. By C. M. Shaar, M.D., F.A.C.S. Captain, Medical Corps, United States Navy, and Frank P. Kreuz, Jr., M.D., F.A.C.S. Lieutenant Commander, Medical Corps, United States Navy. Philadelphia: W. B. Saunders and Co. Price $3.00.

This book gives a comprehensive and detailed description of the Stader reduction and fixation splint, its mechanical principles and its application to specific fractures. While advocating the Stader splint, the general principles set forth and the sites for insertion of the pins are applicable to other types of external skeletal fixation. Meticulous attention to detail is essential to the successful use of this valuable addition to the methods of treating fractures. This manual should be found helpful to all who are interested in this new technique.

PICTORIAL HANDBOOK OF FRACTURE TREATMENT. By Edward L. Compere, M.D., F.A.C.S. Associate Professor of Surgery, Northwestern University Medical School; Chairman, Department of Orthopedic Surgery, Wesley Memorial Hospital; Consulting Orthopedic Surgeon, Chicago Memorial Hospital; and by Sam W. Banks, M.D. Associate in Surgery, Northwestern University Medical School; Attending Orthopedic Surgeon, Chicago Memorial Hospital. Chicago: The Year Book Publishers, 1943.

Written for the general practitioner, medical student or intern, this book gives in compact but adequate form the treatment for the more common injuries encountered in practice. The authors have avoided presentation of several different methods of management for each type of injury, but have given the simplest principles and methods which in their hands have given uniformly satisfactory results. The book is well illustrated and should prove a handy, ready reference for the busy practitioner. The chapter on compound and infected fractures is condensed but comprehensive.

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Two postgraduate credits are given by the Michigan State Medical Society to all of its members who registered and attended the 1943 War Conference of the Society, held in Detroit, September 22, 23, 24.

The total registration of Doctors of Medicine at the 78th Annual Session of the Michigan State Medical Society was 1,713.

Those registering on Monday and Tuesday, September 20-21, included:

W. H. Alexander, Iron Mountain; John Joseph Angel, Detroit; Joseph H. Andries, Detroit; Robert J. Armstrong, Kalamazoo.

L. J. Bailey, Detroit; Robert H. Baker, Pontiac; R. H. Baribeau, Battle Creek; Wyman D. Barrett, Detroit; W. E. Barstow, St. Louis; D. C. Beaver, Detroit; Otto O. Beck, Birmingham; Myron G. Becker, Edmore; Claud W. Behn, Detroit; Henri Belanger, River Rouge; F. A. Boet, Grand Rapids; Leon M. Bogart, Flint; Walter H. Boughner, Algonac; William L. Bird, Greenville; W. N. Braley, Detroit; F. W. Bramigk, Detroit; Don R. Brasie, Flint; Robert S. Breakey, Lansing; J. D. Brook, Grand Rapids; Clark D. Brooks, Detroit; G. M. Brown, Bay City; H. A. Brown, Jackson; A. S. Brunk, Detroit; C. F. Brunk, Detroit; M. F. Buell, Dearborn; Frederick G. Buesser, Detroit; Samuel A. Butler, Pontiac; Volney N. Butler, Detroit.

A. C. Callery, Port Huron; Alexander M. Campbell, Grand Rapids; Meyer O. Cantor, Detroit; Earl I. Carr, Lansing; William J. Cassidy, Detroit; A. E. Catherwood, Detroit; M. S. Chambers, Flint; William P. Chester, Detroit; Donald Chandler, Grand Rapids; L. G. Christian, Lansing; Harry L. Clark, Detroit; B. L. Connelly, Detroit; Henry Cook, Flint; Raymond R. Cook, Akron; Warren B. Cooksey, Detroit; Burton R. Corbus, Grand Rapids; J. T. Connell, Flint; C. Vincent Costello, Holland; H. H. Cummings, Ann Arbor.

Ernest D'Alcorn, Muskegon; Milton A. Darling, Detroit; Luther W. Day, Jonesville; Wm. A. Defnet, Detroit; T. E. DeGurse, Marine City; R. H. Denham, Grand Rapids; C. Ford DeVries, Lansing; Harry F. Dibble, Detroit; William M. Donald, Detroit; Frank Doran, Grand Rapids; Chester Doty, Detroit; Bruce H. Douglas, Detroit; Robert S. Drews, Detroit; Fred Drummond, Kawkawlin; Don H. Duffie, Central Lake; Donald C. Durman, Saginaw; Chas. E. Dutchess, Detroit; H. D. Dykhuizen, Muskegon.

Joseph L. Egle, Gaylord; Herman C. Emmert, Detroit.

Ward S. Ferguson, Grand Rapids; Alex V. Forrester, Highland Park; L. Fernald Foster, Bay City; Ralph O. Fuerbringer, Detroit.

Harold H. Gay, Midland; L. O. Geib, Detroit; W. J. Gelhaus, Monroe; Louis W. Gerstner, Kalamazoo; A. A. Goldman, Detroit; William S. Gonne, Detroit; C. S. Gorsline, Battle Creek; Walter C. Gray, Detroit; Frank R. E. Gratzek, Detroit; T. K. Gruber, Eloise; E. S. Gurdjian, Detroit.

A. T. Hafford, Albion; Arthur S. Hale, Detroit; D. V. Hargrave, Eaton Rapids; W. B. Harm, Detroit; L. C. Harvie, Detroit; Clyde K. Hasley, Detroit; Wilfrid Haughey, Battle Creek; Theo. F. Heavenrich, Port Huron; Leslie T. Henderson, Detroit; C. L. Hess, Bay City; Leland V. Hewitt, Detroit; Louis J. Hirschman, Detroit; Lt. Cmdr. Theo. E. Hoffman (MC) USNR, Chicago; Martin A. Hoffmann, Detroit; R. J. Hubbell, Kalamazoo; L. W. Hull, Detroit; Verne G. Hunt, Detroit; W. H. Huron, Iron Mountain; Wm. A. Hyland, Grand Rapids.

Stanley W. Insley, Detroit; R. C. Jamieson, Detroit; B. H. Jenne, Detroit; Alpheus T. Jennings, Detroit; H. H. Johnson, Martin.

Joseph A. Kasper, Detroit; Frank A. Kelly, Detroit; Ralph Kernkamp, Detroit; C. R. Keyport, Grayling; A. S. Kitchen, Escanaba; Leo A. Knoll, Ann Arbor; Arthur H. Kretchmar, Flint Earl G. Krieg, Detroit.

Alfred LaBine, Houghton; Charles B. Lakoff, Detroit; John H. Law, Detroit; Charles F. Lawler, Birmingham; Wm. C. Lawrence, Detroit; P. L. Ledwidge, Detroit; James J. Lightbody, Detroit; Bruce C. Lockwood, Detroit; Robert T. Lossman, Traverse City; S. L. Loupee, Dowagiac; Henry A. Luce, Detroit.

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L. Paul Ralph, Great Lakes; Frank E. Reeder, Flint; Capt. J. J. Reichman, Mt. Clemens; Wm. S. Reveno, Detroit; E. S. Rhind, Sault Ste. Marie; Robert P. Richardson, Wayne; Philip Riley, Jackson; James Milton Robb, Detroit; H. R. Roehm, Birmingham; James R. Rogin, Detroit.

Edw. O. Sage, Detroit; Paul T. Salchow, Detroit; R. D. Scott, Flint; M. Cole Seager, Brown City; Laurence F. Segar, Detroit; Lowell S. Selling, Detroit; Henry T. Sethney, Menominee; James K. Shafer, Dearborn; Loren W. Shaffer, Detroit; H. K. Shawan, Detroit; Hollis L. Sigler, Howell; C. E. Simpson, Detroit; E. F. Sladek, Traverse City; A. R. Smeck, Detroit; D. R. Smith, Iron Mountain; Lillian R. Smith, Lansing; Carl Snapp, Grand Rapids; M. E. Soller, Ypsilanti; G. Howard Southwick, Grand Rapids; R. A. Springer, Centreville; Wm. J. Stapleton, Jr., Detroit; Louis D. Stern, Detroit; A. E. Stickley, Coopersville; W. F. Strong, Ontonagon; Oscar D. Stryker, Fremont; Palmer E. Sutton, Royal Oak; Donald W. Thorup, Benton Harbor; Clarence Toshach, Saginaw; Thos. P. Treynor, Big Rapids.

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John J. Walch, Escanaba; Roger Walker, Detroit; F. C. Warnshuis, Windsor, Ont.; Geo. Waters, Port Huron; E. H. Webster, Sault Ste. Marie; Frank A. Weiser, Detroit; J. S. Wendel, Detroit; A. V. Wenger, Grand Rapids; Max Wershow, Detroit; M. G. Westmoreland, Chicago; A. H. Whittaker, Detroit; D. Bruce Wiley, Utica; C. Willison, Sault Ste. Marie; E. R. Witwer, Detroit; Robt. A. C. Wollenberg, Detroit; Wm. P. Woodworth, Detroit.

Wm. Rae Young, Lawton.

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L. K. Babcock, Detroit; Raymond B. Baer, Detroit; M. E. Bachman, Detroit; Carl E. Badgley, Ann Arbor; James E. Bailey, Coldwater; Clarence Baker, Detroit; Frederick A. Baker, Pontiac; Joseph A. Bakst, Detroit; Charles W. Balser, Detroit; G. T. Bailey, Walkerville, Ont.; Fredric F. Balz, Detroit; F. Marion Barker, Detroit; Helen S. Barnard, Muskegon ;Jos. Roy Barton, Detroit; S. E. Barnett, Detroit; F. W. Baske, Flint; A. W. Baranowski, Detroit; Don J. Barnes, Detroit; John B. Barnwell, Ann Arbor; B. J. Bauer, Detroit; Ernest W. Bauer, Hazel Park; A. Robert Bauer, Detroit; Theodore I. Bauer, Lansing; Walter L. Baumann, Detroit; Jack W. Baxter, Toledo; W. G. Beattie, Ferndale; Perry C. Beck, Bronson; C. W. Beers, Muskegon; Howell L. Begle, Detroit; Margaret Bell, Ann Arbor; Wm. M. Bell, Detroit; J. Kenner Bell, Detroit; C. C. Benjamin, Ludington; A. H. Benson, Mancelona; John C. Benson, Flint; Fred Bentley, Plymouth; Neil Bentley, Detroit; Wm. Berger, Detroit; Murray S. Bergman, Detroit; Harry S. Berman, Detroit; Robert Berman, Detroit; Bernard Bernbaum, Detroit; Albert E. Bernstein, Detroit; James S. Bertoglio, Detroit; Andrew P. Biddle, Detroit; C. D. Birkelo, Detroit; C. Clare Bishop, Almont; Kenneth E. Blair, Detroit; Perry S. Black, Detroit; Morris H. Blau, Detroit; Joseph Bleier, Detroit; Abraham Block, Detroit; Arthur R. Bloom, Detroit; Benjamin B. Blum, Petoskey; I. I. Bittker, Detroit; Franz L. Blumenthal, Detroit; H. C. Bodmer, Kalamazoo; Arthur F. Boell, Detroit; Donald Boersma, Detroit; Robert E. Bogue, Detroit; William P. Boles, Flint; Ellis J. Bolan, Suttons Bay; Ephraim B. Boldyred, Grand Rapids; A. T. Bonathan, Flint; W. M. Brace, Ann Arbor; Milo J. Brady, St. Clair Shores; F. P. Brender, Frankenmuth; Walter A. Briegel, Detroit; Guy D. Briggs, Flint; Harold J. Brisbois, Plymouth; Glen A. Brough. Grosse Ile; P. H. Broudo, Detroit; F. W. Brown, Watervliet; Harvey F. Brown, Detroit; H. O. Brown, Detroit; I. W. Brown, Kalamazoo; Stanley H. Brown, W. Detroit; Henry S. Brown, Detroit; George F. Browne, Detroit; Brock E. Brush, Detroit; Howard O. Brush, Port Huron; John Bryce, Detroit; W. F. Buchanan, Fenton; John

(Continued on Page 858)



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OUR FIGHTERS' HEALTH

News as heartening in its way as the tidings of victory itself has come from North Africa in the announcement by Maj. Gen. Ernest Cowell of the British army, director of the allied medical services, who says that the American and British armies in that area probably are the healthiest expeditionary force in the world and that no expeditionary force in history has had better provision made for its medical care.

Deaths from wounds in the African campaign were only a fraction, Gen. Cowell said, perhaps one-fifth or less, of the rate established in the first World War. One general hospital which handled 1,500 severely wounded cases reported only five deaths.

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The Position of Postwar Medicine in Relation to Expanding Government Controls*

By Edward A. Schumann, M.D.

Philadelphia, Pennsylvania



■ This annual address, organized by action of the House of Delegates of the Michigan State Medical Society in 1934, was given the name of that outstanding advocate of postgraduate training, Dr. Andrew P. Biddle, and was designed to present various aspects of this most important department of our professional work.

It was the hope of your essayist, when honored with the invitation to deliver this oration, that he might offer certain suggestions of his own as to ways and means of furthering the continuity of medical training after the undergraduate years, and like matters.

But events move too fast. In months, nay weeks, such profound changes are taking place in the relation of medicine to governmental agencies that it seems futile to plan and dream of a great coördinated system of residencies and fellowships supplemented by local courses wherein groups of practitioners might receive instruction in the various departments of our profession.

If one surveys the world scene of today with an unprejudiced and detached viewpoint, it seems clear that even amid the turmoil and strife of global war, a great impulse is sweeping mankind; a craving for personal security at any cost; a willingness on the part of whole populations to submit, indeed, to seek, regimentation and to relinquish personal liberty of action if only they may have some promise of safety "from womb to tomb."

Perhaps life has grown too complex, perhaps the machine age which was to have made men free, has in truth enslaved them until, dazed by the effort to find a way of life amid the confusion, with initiative and daring supplanted by fear and anxiety, they turn to some all-powerful force, too often that cold and enervating thing called "The State" to lead them to safety and security, upon the promise of which they cheerfully yield up their personal liberties.

We have heard much of "four freedoms" for which we must strive but nothing at all about the only freedom which possesses any real significance—the freedom to be free. To gamble with life, to set oneself against the world, to face poverty and privation if it be in the effort to attain the goal one has set; to win or to go down in defeat and rise again to try again; this is the freedom that makes men, men.

In these sad times of ours that very noble term "rugged individualist" has come to be used as a contemptuous epithet rather than an accolade. However, no matter how one may lament or denounce, the fact remains that all over the world even as in these United States, there is

*The Biddle Oration, General Assembly, Seventy-eighth Annual Session of the Michigan State Medical Society, Wednesday evening, September 22, 1943, at Detroit.

clamor and demand for security en masse regardless of the sacrifice of individual liberties. It is this tendency which leads to the rapid growth of socialization in all of its protean manifestations and which is developing so strongly in our profession.

The citadel of free and individual medicine, with its age-old principle that in any matter of illness only two parties are directly concerned, the patient and the doctor, the community being involved only in the event of contagious disease and even then no more than is sufficient to prevent the spreading of contagion, has been attacked for a number of years but the siege has been pushed even more vigorously in the past few years.

The surveys and recommendations of several Foundations, the report of the Committee upon the Costs of Medical Care and many other efforts to alter the status of the physician and his relation to the public, are familiar to all.

With the advent of the war and the over-all regimentation of national resources and skills made necessary for a successful outcome of the conflict, State control of the medical profession has been expedited enormously.

It will be of interest to both physicians and the lay public to know that medical education has now been completely taken over by the Army and Navy of the United States: From now on all men entering medical school or the two premedical years of education, if they have successfully passed the examination given by the Army and Navy, will become enlisted men in the Army and Navy. They will be in uniform during their period of medical education, their tuition will be paid by the Government, their board and lodging will be paid, and they will receive $50.00 a month. This is a radical departure from the plan of private financial responsibility for medical education. It is the plan which has been thought necessary by the War Manpower Commission to be certain that an adequate number of doctors, dentists and veterinarians are trained and available for the armed forces and the civilian population.†

The content of the teaching has not as yet been involved, but the length of courses, who may enter medical schools, the direction of their time while engaged in the study of medicine are all dictated by these officers.

In connection with the War Manpower Commission, the length of internship is regulated, as is that of residencies and fellowships and in the latter two, the nature of the subjects studied are fixed. For example: procurement and assignment states that physicians who hold reserve commissions shall not be approved for residencies in pediatrics or obstetrics and gynecology, these services being reserved for physicians ineligible for military service, excepting when in the decision of the State Procurement and Assignment Officer, exception should be made.*

The enormous wisdom of this latter ruling will not manifest itself for some time. In the event of a long war and a protracted period of rehabilitation in Europe, during which we will obviously need to maintain a large army in active service, the inevitable breakdown in the so-painfully built-up standards of maternal and child welfare, this due to the lack of trained physicians to supervise the program and the forced cessation of graduate training along these lines, will abundantly demonstrate the far-sighted intelligence of this directive. The nursing profession has also been taken over by the armed services and there are some activities already visible which may portend governmental management of hospitals in the near future.

Should the Wagner-Murray act become law, medicine will immediately be under complete government control for all practical purposes. Although the act as written provides medical service only for persons earning $3,000 or less annually, one can imagine how long it will be before those in higher income brackets will demand and receive such services. The details of this sweeping legislation are so well known to medical men that discussion of its provisions is unnecessary here.

The hospitals too, are in a precarious state. Their intern and resident policies are already decided for them; it has been arranged that the wives of enlisted service men requiring maternity care may enter hospitals as ward patients with a prescribed rate of payment (whether or not many of these women could have paid for semiprivate accommodations), and that other plans are in preparation for the controlled care of ill persons there can be little doubt.

In many sections of the country, notably the Eastern Seaboard, most hospitals exist by the generosity of private charity. Some of them receive financial aid from the State, as in Pennsyl-

†Frank H. Lahey, M.D., Bulletin American College of Surgeons, June 1943, p. 169.

*Report and Recommendation, Committee on Hospitals, Procurement and Assignment Service, New York, February 23, 1943.

vania, some are able to carry on by reason of their large percentage of private patients whose fees maintain the institution, but by and large, private donations and bequests, endowed rooms, beds, etc., are the chief support of most of these institutions.

With taxes not only remaining high but rapidly becoming much greater, as a result of our unbelievable expenditure in the War Effort and other matters, gifts for charitable purposes will dry up at the source. The large bequests and grants which have been the very essential of hospital maintenance will, of necessity, disappear, so that boards of managers will be driven to accept financial aid from the government and the inevitable federal control must follow.

It may be that when the tumult and the shouting dies, the practice of medicine may be returned to private hands, the schools resuming their original controls and the hospitals being relieved of all bureaucratic interferences. This is an eventuality to be devoutly desired but surely only a confirmed optimist can discern any evidence of such movement in the light of the public and governmental philosophy of today. It is far more probable that since the agencies controlling medicine are constantly tightening their grip, the medical students who now are unaccustomed to the ordering of their personal plans will have become habituated to regimentation.

Older members of faculties who know only the old ways will have been retired or dead and their young replacements will consist of men who have never experienced any uncontrolled student or graduate life.

Trustees, finding no ready means of replenishing the empty coffers of their schools, will be happy to continue under government patronage, and like the faculties, the complexion of these bodies will have been much altered. So, it seems that unless there be a sharp reversal in the trend of public thinking it is at least a fair speculation that medicine will not soon be restored to private domination.

The commander of an army may anticipate victory but always is mindful of the fact that defeat may come and if he be a resourceful leader, he makes plans for delaying action, for retreat and lest the worst should befall, he is prepared to offer such terms as will secure to his forces the utmost salvage possible after surrender. Organized medicine may have prepared plans with which to meet more and greater onslaughts on the private enterprise of the profession but if so they have not been presented or discussed in any concrete form.

All of the attacks upon the present system have been met by our general staff with denial of their validity, reports and surveys have been declared biased and untrue and the only concessions we have made have been in approving of group hospitalization organizations and of caring for the sick poor by arranging for the payment of extremely low fees, by municipalities or states through county medical societies. Such schemes are really only delaying actions and neither provide a good line of retreat, nor do they even suggest strong defensive measures.

Let us, for the sake of argument, agree that State medicine, socialized medicine, centralized medicine, call it what you will, is upon us. If so, how shall it be organized? Is there any workable plan which will meet with the national demand for complete state control and yet be of the greatest mutual benefit to patient, community and doctor?

We, of organized medicine, have been imbued with the dread of socialization. We have seen the destruction of the patient-physician relationship (one of the most overrated concepts imaginable). We have deplored the loss of free enterprise and the incentive to do good work. Whether these direful forebodings are justified is quite a question and it may even be that the profession and the public will find itself in better care under State Medicine than before.

Though we may be loath to admit it, socialized medicine has much in its favor. Many of the objections to the present system are true. The quality of medical care is quite variable in different areas in the United States, it is undeniable that the low-income group either accept charity or cannot pay the expenses demanded by modern diagnostic methods. These weaknesses of the existing scheme of things might be expanded indefinitely but they are matters of common knowledge and discussion in and out of the profession.

There are two basically differing concepts under which State medicine may operate.

The first is to develop and extend the methods we have been trying out in order to satisfy the demand for socialization without yielding our position of independence. These methods include

a widening of hospitalization benefits, extension of the care of the indigent by arrangement as to fees made with state welfare bodies and the like and other similar expedients. None of these satisfies the proponents of socialized medicine; neither do they solve the problem but only add to its perplexities by the introduction of third parties such as the hospital associations, and by the detailed and trifling bookkeeping required to justify payment for the care of the poor.

Most important, though rarely mentioned in the consideration of methods of semisocialized medicine, none of these plans suggests any improvement in the condition of the doctor. He will become involved in a maze of reports, statements and explanations, all in triplicate. His hours of work remain as long and irregular as before; his income is decreased rather than increased; no provision is made for his protection against illness or old age and, as usual, should he require rest and relaxation, his income ceases for the period of his absence. In short the doctor himself remains as ever, the forgotten man.

Furthermore, the extension of state payments for services rendered will inevitably lead to the injection of politics into the scheme. Lay administrators, supervisors and clerks must be appointed by the party in power, with all the evils attendant upon such designs. This particular variety of socialization of our profession certainly offers little to recommend it and much to condemn it.

The alternative plan is for government to take over the healing art in toto. This is a tremendously radical suggestion, which would require a complete reversal of the present ideals of medical service. Even if adopted, it would probably be a long period of transition from the old to the new until a new generation accepted it entirely. It is suggested for the purpose of bringing out discussion.

Let us visualize a completely federalized plan for medicine and consider what might happen if the care of public health were completely and absolutely made a function of government. If this were done the system would operate about as follows:

Appropriate legislation having been enacted, the President of the United States would appoint to his cabinet a Secretary of Health. The first incumbent would be selected from among those persons recommended for the office by the American Medical Association.

The Secretary of Health would then appoint a series of directors, one for Medical Education, one for Hospitals, one for Civilian Practice, one for Epidemiology and so on. From these directors would stem subordinate groups until the field was fully covered. The system would work along lines similar to the Army and Navy with a secretary in the cabinet as head, a chief of staff and so on. This organization would take over every medical school and every hospital in the country.

Persons desiring to enter the field of medicine would do so, understanding that from the moment of their acceptance as students until their retirement for age or disability, they would be salaried officers of the Government and subject to the orders of their superior officers and the regulation of the National Department of Health.

These prospective students would appear before boards of doctors at various points and after evaluation of their capabilities and preliminary education, those accepted would be assigned to medical schools as student medical officers on a salary and with tuition and maintenance supplied. Now leaving the students for a moment, let us turn to the medical schools themselves.

It is understood that they are government-owned, -staffed and -directed and that the degree of Doctor of Medicine offered upon the completion of the course is uniform throughout the United States.

In the various schools themselves, all teaching of the basic sciences would be abandoned at once. Instead there would be established in several areas, the East, the Middle West, the far West and the South, let us say, great institutes for study and research in anatomy, physiology, chemistry, bacteriology and the like. Here in congenial surroundings, with a wealth of material and equipment, our renowned teachers of basic science would develop well coördinated faculties and here the students would spend the time necessary to complete their courses. The advantage of having these concentrated centers of teaching and research activity, and the immense distinction and authority which would be the natural sequence of the gathering of such large numbers of distinguished men in one group is, of course, obvious.

After basic science, the students would be

scattered throughout the medical schools, but even here there would be considerable migratory activity. Men from the Northern schools for example, would spend several months in the South, studying malaria and other diseases peculiar to hot climates and other comparable exchanges would no doubt, be carried out.

After graduation, the young doctor, now promoted and receiving more pay, would be assigned to internship in the hospitals of the country at large. Careful records of the individual man's capabilities and desires would be kept during the internship and upon its completion boards of medical officers would consider the year's group of men and arrange the disposition of their first term of service of three years, always with all possible deference to the desires of the man himself. Thus those graduates who exhibited a flair for research and a desire for such work would be assigned to the various institutions established for this purpose.

Other men with certain aptitudes and scholastic records would go into residencies in the various divisions of medicine. The rest of the graduates would for a time at least, be directed into general practice throughout the country and herein lies an important phase of the plan. Doctors would be assigned to practice in various regions without regard to the desirability of such regions as pleasant or unpleasant locations for a practicing physician, again with regard for the doctor's own preferment as to his place. The city where he lived before entering medical school for example. The significant point is that all locations would be for a term of, say, three years. After this period, requests for transfer would be received and acted upon so that a man situated in a personally distasteful community might be moved into more favorable surroundings. The fact that all of the doctor's income is derived from salary rather than fees collected, would automatically remove the question of financial disadvantage of a change in the place of his practice.

At regular intervals, too, requests of physicians for special training would be received and the applicant's qualifications considered.

The nature of general practice under the proposed system remains to be considered. The manner of practice must necessarily be controlled to some extent by the area and population served. Thus in sparsely settled rural communities the doctor would have his office in his home as now, and would personally receive calls from patients and go to their homes. The equipment and maintenance of these rural offices would be at government expense. In most sections of the country, however, the physician would have no office but would attend regular hours held at the hospital or health center to which he was attached. These hospital offices would correspond to what are now out-patient clinics or dispensaries except that all ambulatory patients in the district would visit these offices regardless of their financial status. The same physician would hold office hours at the same time each day, so that patients could regularly obtain his services by coming to the office while he was on duty.

The physician, himself, would not receive any house calls direct, but these would be made to a central health registry, the clerk on duty transferring the call to the doctor living nearest the source of the call. If he were not immediately available, the summons would go to the next nearest man.

Should the physician who first attended a person ill in his home care to continue with the conduct of the case, this could be readily arranged. If one medical man chanced to dwell in a congested district where calls were many, the work could be easily equalized by the keeping of lists of visits made, and distributing these so that no man would be overworked while his colleague had but little to do.

The operation of hospitals and health centers throughout the country is a most significant part of this plan. Under our present system most of these institutions exist largely as a result of gifts and donations from public-minded citizens. Their standards vary greatly even though they conform to the minimum setup by the American College of Surgeons.

Most of them care for all types of illness and accident, with the exception of contagious disease and mental diseases which are usually segregated. All of them have laboratories of varied degree of completeness and most possess x-ray facilities.

The wastage of effort and increased overhead in this system is obvious. In cities, hospitals situated among people of higher income groups usually have but little occupancy of their medical wards, while the surgical and maternity depart-

ments are overcrowded. In poorer communities the reverse is often the rule.

Under a controlled national medicine, the hospitals of a city would be converted into specialty centers. Those, usually small institutions, situated around the edges of the city would continue their general work, being utilized mostly as emergency units and to take care of short cases.

The larger hospitals in the city proper would admit and treat only certain types of illness. Medical cases, acute in one hospital, chronic or of long duration in another, surgery, pediatrics, maternity, metabolic disorders, indeed all of the great divisions of clinical medicine would be admitted to or transferred to an institution caring only for a specific branch of medicine.

Consultations with physicians from other hospitals would be the rule so that every patient might enjoy the benefit of complete study and treatment by men highly qualified for the purpose. Overlapping functions such as laboratory and x-ray would be centralized. Each hospital would be equipped with a simple clinical laboratory where urinalysis, blood counts and the like, could be done. All major laboratory work would be done in a large central plant completely furnished with apparatus and manned by pathologists, bacteriologists, chemists, serologists and so on, with sufficient technicians to make any test or study promptly no matter how complicated. Motorcycle messengers would convey specimens to this central laboratory and reports would be returned by them at frequent intervals.

The same would apply to the x-ray. A great central establishment, magnificently equipped and staffed by specialists, would be erected and here patients would be brought by ambulance. A trip in a modern ambulance, traveling over good roads, is no more harmful to a patient than the journey from the ward in a large hospital to the sometimes distant x-ray department.

Of course all hospitals would have a bedside x-ray apparatus for use among very ill persons or where speed in obtaining a film was necessary.

The improvement in the quality of this work under such conditions and the enormous saving in overhead expense, seems obvious.

In smaller communities where four or five doctors were located, a small hospital or health center would be erected. Here the doctors would have their offices, doing regular tours of duty and here a few patients could be admitted for study and treatment, to be transferred later should the occasion arise to one of the large hospital centers.

These large hospitals would be located in carefully planned situations each at the center of a rural area. All seriously ill or injured persons would be removed to one of these hospitals at the earliest opportunity. This is now in practice in the institutions connected with State Universities in several of our states, Michigan and Iowa being noteworthy examples.

Conferences, meetings, graduate study and specialist courses would be an integral part of the project, together with great emphasis upon the control of infectious disease and the public health in general.

So, in civilian practice, in hospital work, doing research in special institutions, teaching and all the rest that is meant by the practice of medicine our doctor would spend his days. Steady growth, regular promotions to positions carrying greater and more responsibility, protected against illness and old age and with regular hours for rest and recreation. It might just be that his lot would not be too difficult to bear.

This proposal is open to the most scathing attack. It destroys at a blow the most honored shibboleths of our profession. Free enterprise disappears. The right to practice medicine where and how one will is taken away. All incentive to science is removed by a system which permits only of regular promotion, so shutting off the urge to win fame and fortune by outstanding scientific contributions and, worst of all, it entirely does away with that most sacred of our "sacred cows," the right of free choice of the individual—the doctor-patient relationship. The incomes of physicians would be materially reduced nor would energy and genius advance above averageness and mediocrity. The whole system would be riddled with politics and favoritism and nepotism would govern promotions to key positions. This last objection may be answered in a few words. Politics would play an important part but, where is this not integral in men's intercourse with each other? At least the whole mechanism would be controlled by doctors, operated by doctors and manned by doctors so that the political side would of necessity, be that of medical politics and not the machinations of party hacks. If one takes a dispassionate attitude, one is sometimes given to wonder whether these

so-called liberties we hold so dear are in truth liberties, and how important they are. Would it be any compensation for their loss if the physician received a salary from the moment he began the study of medicine; if he, during his whole life, had a regular tour of duty of a definite number of hours each day beyond which he could not be disturbed except by his own desire to follow some interesting patient or in times of crises; if he were assured of a definite leave of absence each year, the vacation time being increased as he grew in seniority and, most important of all, if he were assured of a continuing salary during times of illness, pension for permanent disability and a set retiring age with retired pay for the duration of his life, not to mention life insurance which would be an automatic part of his contract.

These advantages must be carefully balanced against lost freedoms and, upon reflection, may indeed far outweigh them.

In order to correct any false impression given by this discussion of controlled medicine, your speaker offers his apologia.

He is personally, an intense individualist despising regulation of his speech and acts. He holds that Governments exist only by will of the people and in their interests and believes that control by the State should be as slight as possible, the only function of such body to be the maintenance of orderly community existence among the citizens by methods originating in themselves and activated by their representatives. All men should be permitted to live their own lives in their own way, success or failure being dependent upon their own efforts, without any interference from society unless, defeated by fate or ill health, they become dependent in which case their fellows will see to their comfort and care.

These views, apparently, are not shared by the majority of people in the world today. As has been stated before and now reiterated, the demand for security seems to transcend all other ideals in life. Material success is regarded in high places as possibly a greater evil than economic failure, and the goal of the nations is to achieve a flat uniformity of the individuals comprising society and the regulation of their every act by appointed groups of master minds.

To emulate the ant people in their completely socialized life habits wherein none is master of his fate nor are there any triumphs or despairs, does not seem attractive.

It is in consonance of this world-wide trend which is deplored that the writer proposes a plan for socialized medicine which offers prospects of being efficient, achieving its purpose and being managed wholly by those most intimately concerned—the medical profession itself. It is his ardent hope that no such plan nor any alternative which abrogates in any way the complete personal liberty of the doctor, will ever be necessary.

MSMS

Social Changes Affecting American Medicine*

By Howard H. Cummings, M.D.
Ann Arbor, Michigan



President, Michigan State Medical Society

■ Social changes are taking place in our country at an ever-increasing speed. Some of these changes mark progress and are expressions of the desire of the majority of people to improve their lot. They are an attempt to guarantee our inherent rights to life, liberty and the pursuit of happiness. Such lofty aims should not be opposed by any group if the objective is to promote the welfare of our whole people. Constant, regular, progressive evolutionary changes are consistent with human life and are parts of nature's law, but hasty, violent and disruptive social changes often impede rather than accelerate social progress.

In the American lexicon the word *voluntary* is essential; it expresses to every citizen of the United States a feeling of freedom that is part of

*President's Address at General Assembly of the Seventy-eighth Annual Assembly of the Michigan State Medical Society, Wednesday, September 22, 1943, at Detroit.

his birthright. Opposed to the word *voluntary* is the word *compulsory*. To every American the word *compulsory*, except in times of national emergency, is alien to his very fibre and creates the desire to resist.

Two powerful and potentially disruptive forces must be faced by the physicians of our country if American medicine is to continue a normal, orderly progress. The first and greatest menace which is affecting not only medicine but all of our national activities is the insidious undermining of our whole democratic system of representative government by the numerous and various bureaus of the Federal government. Directives written by non-elected bureau chiefs supersede our laws and are forced upon states and people regardless of their wishes.

The second potentially disruptive force is a plan to extend the benefits of social security to include medical care and hospitalization for 110,000,000 people. This plan, known as the Wagner-Murray-Dingell bill, proposes a compulsory six per cent deduction from every workman's pay envelope and a matching six per cent from his employer. Self-employed persons whose annual incomes are $3000 or less would contribute seven per cent. This plan would add $12,000,000,000 to our annual tax burden, $3,000,000,000 of which would be allotted to the Surgeon General of the United States Public Health Service to run American medicine: to provide medical and hospital care for all our people, to control all hospitals, to set medical fees and hospital rates, to assign a certain number of patients to each doctor and to designate specialists. Under the plan a patient may choose his own physician if the doctor has not his allotted number of patients.

Such a plan smacks of a foreign ideology. It is compulsory and therefore un-American. It is being offered as an unguent to heal a serious deviation of labor from a political party. It has not brought better medical service to the people of any country where it is in operation. Nevertheless, if the majority of our people, flushed by the full pay envelopes of war days, find this plan acceptable, or if they are convinced by propaganda that there is a great need for better and wider distribution of medical services, one of two things will happen: either the whole matter will be passed by the public to Congress which will settle the problem by enacting the Wagner Act, or the President will set up a bureau to direct American medicine.

If the medical profession of the United States is to preserve the democratic practice of medicine, compatible with the social changes which are rushing upon us, three obvious objectives must be attained: improvement in the quality of medical service; wider distribution of medical services; change in the methods of payment for medical services.

The quality of medical service in our country is good—probably better than in any other—as indicated by comparative vital statistics. However, there is opportunity for still greater improvement. This is an individual problem affecting every physician. Only by continuing postgraduate study from graduation to the end of his professional career can the doctor of medicine keep abreast of medical science and bring modern methods of prevention, diagnosis and treatment to his patients. The large sums of money spent by the states to supplement medical tuitions and thus meet the cost of medical education are, indeed, poorly invested if the recipient of these subsidies brings to his patient only the methods taught during his medical school years.

For many years different plans of postgraduate medical education have been operating in several states. No uniform plan for all states has been established and because of the different problems to be met in different states it is possible that no national program could be established. However, after fifteen years of study and experimentation with postgraduate medicine in Michigan, certain fundamental principles have been established which seem essential to any successful plan. The program should be available to every physician in the state; it should be divided into extramural and intramural activities to serve both general practitioner and specialist; it should be a coöperative effort and should have the active support of the organized medical profession and the medical schools of the state; it should be presented by able teachers and clinicians and should have active direction; it should present material useful to the physician in his daily practice; it should conserve the doctor's time and not require him to absent himself from his patients too long; it should be given at regular periods to establish the habit of self-improvement for the ultimate benefit of the patients

served. Such a program as outlined, if developed in each state, would carry us far towards the chief objective of American medicine: better medical service for the American people. As a secondary result it would improve the relations between the laity and the medical profession.

The second objective of American medicine should be a better and wider distribution of medical services. Our present system is a complicated and expensive one which has been developed through the years to meet the growth of our country. Private competitive medicine has constituted the bulk of medical service. It has done a magnificent job and today, with the automobile, good roads and numerous community hospitals, it is serving still better. In spite of this record of achievement the private practice of medicine has been under a bombardment of adverse propaganda. That it has been able to maintain its position is due entirely to the confidence the American people have in their doctors of medicine. It becomes apparent now that the prolonged softening-up process of propaganda against American medicine was a preparation for the introduction of the new Wagner Act.

How can the medical profession bring about a wider, more equitable distribution of medical services? Paradoxically, not by distributing medical men geographically to every hamlet, village and town in the country, but by planned grouping of medical men in various regions where health centers, clinics and hospitals would be available. This system of distribution is now in active operation throughout our country. Our private, city, county, state and federal clinics and hospitals are well staffed by able physicians. One further step should be taken, and that is the opening of these staffs to the general practitioner of medicine. He as well as his more fortunate colleague is entitled to all the modern medical facilities for the diagnosis and treatment of disease. Even in sparsely settled parts of our country small clinics and hospitals should be available to the physicians of these regions. By this method the people are better served, the cost of medical care is reduced. The people of the district are never left unprotected by the illness or absence of their family doctor. Small groups of doctors in these remote places can bring specialized knowledge of medicine to their patients.

DeKruif in his latest book "Kaiser Wakes the Doctors" describes the method by which excellent medical and hospital service is furnished to the workmen in Kaiser plants. The plan is a prepayment insurance one and medical services are given in combined clinics and modern hospitals by a salaried staff of specialists. The cost to the workman is seven cents a day. The system is being expanded to care for the wives and children. Kaiser foresees one thousand similar hospitals scattered over the country, "little Mayo Clinics for the common man," as DeKruif designates them. This plan while highly successful during wartime has yet to be proven in normal peacetime.

Complicated as is the problem of better distribution of medical care to all our people, it is not too great for the medical profession of our country to solve. Much has been done in numerous states to bring better medical service to the people. Our own State Society has expended much money on and given years of study to this problem. From these efforts has come our Michigan Medical Society which has served one-half million of Michigan's workers. Much remains to be done and time for doing may be short. The public awaits more and better medical services. Will the physicians plan and direct these services or will reformers, economists, public health men and politicians force their plan upon 110,000,000 Americans?

The American people have been more interested in the cost of medical care than in its quality or its distribution. Economists and reformers have been most critical of the high costs of modern medical care. It is true that scientific medicine has more to offer than the public can pay for. This problem is being solved today by various types of voluntary medical insurance. The growth of this method of meeting the cost of medical care is apparent to every practitioner of medicine for each day he receives insurance blanks to fill out.

Labor has accepted this method of paying for medical services but it is clamoring for the same protection for the members of its families. The medical profession in Michigan and other states has spent years in planning and putting into operation prepayment plans for medical service. That these plans will be changed, broadened and extended to larger groups seems inevitable. What part the commercial insurance companies will play in this changing picture the future will re-

veal, but more and more it becomes apparent that voluntary, prepayment insurance for medical services may eventually protect most of our people.

American medicine cannot stop social changes; it should not attempt to. However, such changes as relate to the health of the public should be planned and directed by doctors of medicine so that the fundamental principles upon which our work is founded and by which it has grown to its present stature, may be maintained.

Constant improvement in the quality of medical service, greater coöperative efforts by the profession to distribute medical services to all people, and the expansion of plans for pre-payment insurance to meet part of the cost of medical service—these are desirable and necessary objectives if American medicine is to continue to work in harmony with the public.

MSMS

EMERGENCY MEDICAL SERVICE HELPS WAR INDUSTRIES

The millions of workers in our war industries have a better chance of surviving major disasters such as munitions plant explosions, because of EMS, it appears from a report by Dr. Ward L. Mould, of the U. S. Public Health Service, at the conference of the American Public Health Association.

The initials stand for the Emergency Medical Service which most city governments have established as part of their civilian defense activities.

Organized primarily to protect the community in event of enemy action, it has proved valuable in disasters unrelated to enemy action, such as the Cocoanut Grove fire in Boston and various disastrous railroad accidents.

Its value to industry was explained by Dr. Mould, who was loaned by the Public Health Service to the Office of Civilian Defense to direct the organization of EMS. Before the war, he pointed out, there was no central point in a community to which the industrial plant doctor could appeal for medical service in an emergency. He had to call hospitals for ambulances, physicians and nurses, or appeal to the police or fire department to arrange for the necessary assistance. Now he can call on the community's Emergency Medical Service which is ready, day and night, to mobilize immediately doctors, nurses, ambulances, hospital beds, plasma and whatever else may be needed.—*Science News Letter,* October 23, 1943.

The pain associated with infectious arthritis of the spine is frequently relieved by deep x-ray therapy.

* * *

The inward bowing of the forearm seen as a complication of supracondylar fractures of the elbow is easily corrected by an osteotomy of the humerus.

EUGENE W. SECORD, M.D., Detroit.

Acceptance

By C. R. Keyport, M.D.

Grayling, Michigan



President, Michigan State Medical Society

■ MR. PRESIDENT, fellow members of the State Society and guests:

To serve as President of the Michigan State Medical Society is a distinct honor. It is with genuine appreciation of this privilege and responsibility that I pledge my efforts to maintain our program of democratic medicine and to urge that your participation and coöperation be steady and enduring.

Again, medicine is at the crossroads. One-third of our membership is in the armed forces of our country. Those at home cannot feel indifferent to the impact of political planning and needless governmental encroachments. All the sacrifices, all the casualties of our country's medical men fighting for the American way of life will have been in vain if bureaucrats lose for us the magnificent place of prestige, leadership and trust in the Society which fighting doctors have died to win.

As we look forward to the tests ahead, this Society's handling of the crushing problems in this crisis will be followed with marked attention and profound concern.

You recall that it was *not the resolutions* of the Apostles, but the *Acts* that were recorded. Democratic ideas in medicine have been severely dealt with in recent years, but some of them will receive glorious vindication if it comes to pass that crusaders in this Society coöperate to demand that the traditions of the past be safeguarded and that the primary concerns and aims of this Society, which are for the benefit of the people, be guaranteed.

Diarrhea of the Newborn: Clinical Aspects*

By David J. Levy, M.D.

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WITHIN relatively recent years a form of diarrhea has manifested its presence among newborn infants, highly communicable in nature and highly fatal in its effect. It has appeared throughout the north temperate zone, and epidemics have been reported from the east, the west, the north and the south of this country, as well as from Canada, Scotland and France and isolated outbreaks not appearing in the literature have occurred, including several within our own experience. The general epidemiology and etiology of the disease have been considered in detail by Dr. Franklin H. Top,† and I will dwell only as necessary on such aspects of these features as is essential to the discussion of the clinical picture of the disease. Because of its high infectivity and communicability, it has caused the closing of many obstetrical services in important hospitals and involved deeply the concern of public health authorities, obstetricians, pediatricians, and the informed laity. Accordingly, each individual case of diarrhea occurring in the newborn infant has become a source of concern and it therefore is a matter of interest and importance to review this disease, and to discuss its differentiation from the other and more benign forms of diarrhea which occur during the neonatal period.

While the report of a grave form of diarrhea occurring in outbreak form among the newborn had appeared in the literature as early as 1928[2] and again in 1932,[6] it remained for Best, Rice, Frant and Abrahamson[8] at the American Medical Association meeting in 1937 to report on the occurrence of the infection as encountered in New York and to focus attention upon it. They reported a series of twenty-seven outbreaks occurring in New York from 1934 to 1937, where out of 5,082 live babies exposed, 750 were attacked with 356 resultant deaths, a morbidity rate of 14.7 per cent, a mortality rate of 7 per cent, or a case fatality rate of 47.5 per cent. Outbreaks described elsewhere showed even a higher fatality rate, others lower, but in general about 50 per cent or slightly less of the affected babies died. Fortunately, we are just now experiencing an apparently less virulent form of the disease with a much reduced mortality, but there is no foretelling in these outbreaks which individual cases will assume the grave form.

Briefly, the individual cases of infectious epidemic diarrhea of the newborn are characterized by abrupt, rapid weight loss and dehydration, toxemia, slight fever, early abdominal distention and frequent, watery, yellow stools, together with a tendency to secondary complications in the respiratory system, and about a 50 per cent chance of a fatal outcome.

The disease, which shows no sex, race, social or economic status discrimination and which occurs in breast fed and bottle fed infants alike, usually begins at the sixth to the tenth day of life. Prematures seem especially susceptible. It may begin as early as the second day and exceptionally as late as the fourth or even the fifth week of life. It is essentially, however, a disease of the early neonatal period. The time of onset argues for a brief incubation period, probably two to six days.

While the disease apparently begins abruptly, one frequently notes for a day or two before the acute onset a listlessness, drowsiness, a lessened food intake and a stillstand or a slight loss in weight. This prodromal stage, when present, corresponds to the stage of incubation. The invasion stage, which most frequently is the first evidence that all is not well with the infant, is characterized by an abrupt weight loss, which may be seven or eight ounces, or as much as a pound in the first twenty-four hours. There is an accompanying appearance of marked dehydration and the occurrence of diarrhea. There appears to be toxemia and a degree of shock present. The infant presents a greyish color, the lips may be red and the mucous membranes dry. There may or may not be a moderate elevation of the temperature. There is almost invariably an early distention of the abdomen. Occasionally, vomiting occurs. The onset may be so sudden that the infant which the day before appeared the picture of health may resemble an infant in the advanced stage of malnutrition. There is a further more

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†Dr. Top's paper appeared in June, 1943, page 459.

gradual weight loss until death or the onset of recovery supervenes.

The stools are yellowish, only occasionally brownish or greenish, and are frequent and watery. Characteristically they are devoid of mucus, blood and pus, and as such are readily differentiable from the stools of the various enteritides. This appearance of the stool must be emphasized. It is so at variance with what one expects of a severe form of diarrhea that nurses and physicians frequently are lulled into a sense of security by their relatively innocent appearance. The significance of the stools must always be evaluated in the light of the circumstances present, other signs and symptoms on the part of the infant and the presence of actual or suspicious cases in the hospital or the community. The bacteriological examination of the stools does not reveal the organisms ordinarily associated with infantile diarrhea. In fact, in the various outbreaks described there has been a complete lack of uniformity of bacteriological findings and so striking has this absence of a common bacterial agent been that a virus etiology has been assumed by many, but here also experimental proof has not been forthcoming. Such diversified organisms as various as the coli group, B. proteus, the streptococci and staphylococci, Morgan's bacillus, B. Mucosus, to mention only a few of them, have been encountered, and negative bacteriological findings serve as a useful diagnostic criterion.

In long drawnout cases the stools may become very few in number and diarrhea may completely disappear and the case still go on to a lethal outcome. This fact lends weight to the assumption that the diarrhea may be only a local manifestation of a systemic disease. A slightly reddened throat seen in some cases and the tendency to respiratory complication bear further on this point.

The fever is slight. The infant may be completely afebrile, but generally a temperature of 100 to 101 degrees is present. A higher fever either represents the presence of a complication, or a diarrhea of different etiology than the one here under discussion.

The course is a rapid one. Cases may terminate fatally in two or three days or may go on for two or three weeks. The average duration is about nine days. The fatal cases present a dramatic and tragic picture. In spite of all that one can do by way of feeding, drugs, fluid administration, oxygen, transfusion, et cetera, the toxemia is progressive and one impotently watches the infant go on to exitus. In the favorable cases, the toxemia and diarrhea gradually disappear and complete recovery occurs.

Complications are frequent and protracted cases, whether fatal or otherwise, generally show a bronchopneumonic development, and otitis media is of frequent occurrence. Meningeal involvement has been known to occur and bacterial invasion from the intestine has resulted in general sepsis with its various manifestations.

As striking as the noncharacteristic bacteriological findings has been the complete absence of characteristic or pathognomonic findings at autopsy. There is a moderate congestion of the intestinal mucosa, occasional slight hemorrhagic areas, a swelling of Peyer's patches, degenerative areas in the liver and kidney, areas of broncho pneumonia, and often otitis media, the nonspecific picture of an acute toxemia involving the intestinal tract, with respiratory tract complications. This negative pathological finding is of diagnostic significance in recognizing the nature of fatal outbreaks.

The foregoing is a picture of the grave form of diarrhea which has made us so fearful of all cases of diarrhea occurring on maternity services. Fortunately, however, we have been experiencing for the past year or two a form of the disease much milder in character and were it not for the fact that approximately ten per cent of the cases assume a therapeutically intractable form and go on to complications and often a fatal termination, one would assume that he was dealing with a simple type of diarrhea.

These milder cases are prone to show a more gradual onset with prodromal anorexia and weight stillstand or loss, and the weight loss is not so severe and abrupt and the appearance of shock is lacking. Fever may be present at 100 to 101 degrees, or may be completely absent, but the stools are of the same yellowish, watery, frequent character, and as devoid of blood, pus and mucus as those previously described. Dehydration is moderate but even in these relatively benign cases clinical acidosis may supervene. The course of these cases is again about a week to ten days and complete recovery takes place in most instances. But even among these cases a certain few develop a fulminating or resistant character and only then one realizes that he is dealing with

a potentially or actually dangerous disease process. Outbreaks of infectious diseases in general vary from year to year and locality to locality, in degree of virulence. It is only safe to assume that in these milder outbreaks one is dealing with a somewhat attenuated form of epidemic infectious diarrhea, and to act accordingly.

By way of differential diagnosis, diarrhea of obviously parenteral origin is sharply to be differentiated from the foregoing. In the presence of other infections, especially of the respiratory tract, frequent bowel movements occur, no doubt representing nature's effort to get rid of absorbed toxins. Coryza, bronchitis, pneumonia, otitis media, pyelitis, sepsis,[1] all of which occur at this age period, may be the cause. Here, however, the obvious infection initiates the diarrhea and does not follow it, the temperature is more likely to be high, and the infection can be frequently traced to the mother, nurse, physician or other contact. The stool is inclined to be more profuse and to contain mucous and curds, but not necessarily so. While the diarrhea is infectious in origin and may be of outbreak dimensions, its nature, cause and prognosis is different from the entity or syndrome described and should not be considered as a form of it. The outbreak of so-called epidemic diarrhea of the newborn, described by Lyons and Folsom,[7] characterized by a fever of 103-105 degrees, accompanying maternal influenza, and responding to influenza convalescent serum, is probably parenteral or due specifically to the influenza virus.

Another form of diarrhea appearing in nurseries of maternity hospitals is that due to heat, or to heat and humidity. Rietschel,[9] in 1910, demonstrated that not only infants who are already undergoing nutritional disturbance may be readily thrown into a diarrheal state by untoward conditions of heat and humidity, but also that otherwise healthy, properly fed infants may be precipitated into diarrhea by placing them under incubator conditions approximating summer heat and humidity. We have seen two nursery outbreaks of diarrhea apparently initiated by abrupt high summer heat, in which, however, several of the infants continued on in a clinical course undifferentiable from epidemic diarrhea. These infants may have been in the incubation stage of such infection, although none was known to be present in the nurseries at the time, or the heat influenced bowel contents may have furnished a favorable medium for the growth of the responsible infectious etiologic agent. The rôle of external temperature in initiating diarrhea in infants is observed repeatedly in overheated nurseries, in uncontrolled incubators, in overdressed infants and during torrid spells in the experience of all of us. Heat diarrhea obviously may occur in nurseries in outbreak form, but the cause is evident and preventable, and the cases, unless too protracted and severe, respond to simple therapeutic measures.

Faulty feeding of the newborn may cause diarrhea or cause preëxisting looseness of other origin to persist. Incorrect formulæ or overfeeding may be responsible. A benign form of diarrhea may occur in breast fed infants contributed to in part, at least, by the low protein content of mother's milk, the fermentative bacteria normally present in the intestinal tract of the breast fed infant and maybe idiosyncratic response to elements in the mother's diet. The artificial feeding most likely to contribute to this result is the dilute milk formula of high sugar content. A simple correction of the diet causes the symptom to disappear.

There is also the so-called physiological diarrhea of the newborn. The alimentary tract of the infant at birth is germ free. With the first ingestion of fluid or food bacteria are introduced, and toward the end of the meconium stage of the intestinal content a benign bacterial invasion has established itself, and the stools on the fourth or fifth day tend to become loose and frequent, and may persist in this state into the second week. This condition does not affect the well-being of the infant and does not constitute infection or disease, but may become a source of concern when infectious diarrhea is feared or prevalent.

Primary enteritides of B. dysenteriæ and other bacterial origin have been described as occurring in the newborn, but as a rule at a somewhat later period. They are readily differentiated by the presence of stools containing blood, mucus and pus, by high fever, and by the bacteriological examination of the stools, which reveals the offending organism.

Likewise cathartic drugs, which rarely if ever are indicated at this age period, may produce stools which are suspicious and persistent, and even indicated medication administered to the mother may have a laxative effect on a given sensitive infant.

We occasionally encounter infants with diar-

rhea of no demonstrable or plausible origin, infants of low vitality and of feeble digestive capacity. It is interesting to conjecture as to what developmental fault may be present or what lack of secretion or hormone may be at fault. The fibrocystic pancreas, for instance, known to be present at birth, and productive of steatorrhea in older infants is one such anomaly worthy of investigation.

The therapy of diarrhea of the newborn involves primarily feeding procedures, drugs, and supportive measures. The artificial food indicated is one of high protein content, such as protein milk or lactic acid milk. The presence of high protein favors the growth of putrefactive organisms in the intestine which enable the production of a bound or formed stool at the expense of fermentative organisms which increase the diarrheal tendency. In the presence of high protein, the essential sugar, especially the maltose dextrin-containing preparations are well tolerated. In the presence of weak milk dilutions sugar tends to cause the diarrhea to increase or persist. Mothers' milk is well tolerated, but it is of low protein content and favors the development of a fermentative intestinal flora. While, other advantages aside, it does not act promptly in arresting a diarrhea, well secreting breasts should not be discontinued, although allaite ment mixte, at least, is frequently indicated. Additional protein, as casec, may be added to mothers' milk or to milk dilutions. To offset the dehydration, fluid administration is of paramount importance. Fluid by mouth and parenteral injection are to be employed. In infectious diarrhea the CO_2 combining power is low and even in otherwise relatively less severe cases clinical acidosis is evident. Lactate-Ringers solution in 5 per cent glucose by continuous intravenous drip is indicated and is often a life-saving procedure. Transfusion is useful but only if the fluid loss has been compensated—otherwise the resultant increase of the already high blood concentration increases the anhydremia and dehydration. We have seen deaths following transfusion, possibly or even probably attributable to this cause. Pectin, in the form of milk mixtures or in medicinal form, seems at times distinctly useful. Sulfa drugs have come into prominent use. Their effectiveness has not been proven definitely, but they should be employed. Sulfaguanidine has been used, but my own experience has been limited to the use of sulfathiazole and sulfadiazene. Succynil sulfathiazole apparently is useful in the surgical disinfection of the bowel, but its action in the presence of loose bowel movement is questioned. Felsen and Wolarsky[3] claim high therapeutic as well as prophylactic efficiency for the administration of combined large doses of sulfathiazole plus intramuscular plasma injections. Complications such as pneumonia and the frequently occurring otitis media call for their own specific management.

Is epidemic infectious diarrhea a new disease? Frant and Abrahamson,[4] in discussing it, say:

"Symptoms and signs are not alone determinants of a disease entity. In final analysis a disease entity is established rather by the characteristic and constant relationship of its symptoms to each other, their sequence in time, their course and duration, and other circumstances underlying their occurrence."

Elsewhere[5] they state:

"It (the disease in question) exhibits the characteristics of a very virulent communicable disease, causing outbreaks having a typical mode of inception and spread. Its rapid clinical course is marked by several merging phases, a period of incubation, a stage of invasion, a toxic stage and a terminal stage of complications and death. Outstanding in the clinical picture are the lack of evidence of parenteral infection and the early absence of temperature reactions. The very watery and yellow stools containing no blood, pus or mucus are characteristic, as well as the progressive intenseness of the intoxication. In addition, the failure of extensive bacteriologic and pathologic investigation to reveal the inciting organism constitutes a negative but highly significant evidence of the intimate relationship between the various outbreaks and the uniform nature of the cases. As an added note, it must be borne in mind that report of outbreaks similar to those which we have been observing have appeared in the literature only within recent years."

Whether a distinct clinical entity or merely a syndrome of diverse etiology, a striking clinical picture presents itself. An attempt has been made herein to review its salient features, and to differentiate it from the more frequent and less grave forms of diarrhea of the neonatal period. Newborn diarrhea in individual instances and even in outbreaks is not immediately diagnosable. The clinical course and apparent transmissibility, which involve the element of time, are essential for correct appraisement and evaluation. However, epidemic diarrhea is apparently endemic and every case of diarrhea appearing in the newborn

nursery must be considered suspect until its be nign character has been established.

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MSMS

Shock (Peripheral Circulatory Failure)*

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The clinical syndrome due to peripheral circulatory failure and generally spoken of as shock is familiar to all those who care for the seriously ill.

The best classification is that of Blalock who divided these cases into four types: neurogenic, hematogenic (oligenic), vasogenic and cardiogenic. The most important of these is the hematogenic type usually caused by serious burns or other types of mechanical trauma.

Accurate diagnosis as well as a thorough understanding of the functional pathology of the various types is necessary for the administration of efficient preventative and therapeutic measures.

■ The clinical syndrome due to peripheral circulatory failure and generally spoken of as shock is familiar to all those who care for the seriously ill. It may be caused by any serious malady but the syndrome occurs most frequently as the result of severe burns or mechanical trauma. The term shock was first used in 1795 by James Lotta. It is interesting to note that he believed the condition to be inflammatory in nature and advised venesection as a therapeutic measure. A few years later, about 1826, Benjamin Travers successfully opposed this concept and showed that venesection is harmful. Since that time the theories of the functional pathology and the therapeutics of the condition have been controversial subjects. Because of the large amount of investigative work done during the last few years, there is good reason to believe that today we closely approach a comprehensive understanding of the condition.

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Classification

Of the different classifications used to describe the syndrome, probably the best known attempts to divide all cases into two types, designated as primary and secondary. Primary shock is a reflex phenomenon manifested by sudden collapse and fall in arterial pressure immediately following physical or psychic trauma. Secondary shock, also known as delayed, medical, surgical, obstetrical, traumatic, operative or hemorrhagic shock, is a much more serious condition. The best classification is that of Blalock, published in 1934. Blalock divided these cases into four types: neurogenic, hematogenic (oligemic), vasogenic and cardiogenic.

Functional Pathology

The neurogenic type, like primary shock of the preceding classification, is characterized by sudden collapse and sudden fall in blood pressure. It is of short duration and is not a dangerous condition. It occasionally accompanies spinal anesthesia but is most commonly exemplified by the ordinary faint following physical or psychic trauma. Its mechanism is well illustrated by the experiments of Glotz who showed that a blow on the mesentery of a frog reflexly causes a general decrease in vascular tone and inhibition of the heart through the vagi. The sudden collapse and fall in blood pressure following a solar plexus blow or sudden injury to other parts of the body are examples of this same reflex phenomenon in man. Usually recovery is spontaneous or occurs following the administration of vasospastic drugs. However, if the trauma is sufficiently serious and especially if adequate treatment is not administered, certain important functional changes occur which cause the patient to pass from the neurogenic into the more serious hematogenic type.

The vasogenic type is caused by the action of

metabolites such as histamine on the blood vessel walls and is characterized by a general decrease in vascular tone. The blood pressure falls early and is followed later by a decrease in cardiac output. The clinical picture except for its more gradual onset and longer duration is similar to neurogenic shock. It is most pronounced where there is much soft tissue injury and therefore is apt to be combined with and act as an aggravating factor in hematogenic shock.

Cardiogenic shock is more common in civilian than in military practice. It accompanies cardiac tamponade and sudden myocardial infarction. In the former, the obstruction to the venous return and in the latter, the diminished cardiac output are the important initiating causes. Clinically this type can be distinguished from the others by the accompanying dyspnea, orthopnea and increased venous pressure. The circulatory failure accompanying cardiac tamponade cannot be significantly improved until the increased pressure within the pericardial sac has been relieved. Transfusion should be started before the pericardium is incised because bleeding is apt to be increased by the reduction of the intrapericardial pressure.

The practicing physician is, of course, concerned mostly with the hematogenic type of shock. To day we know a great deal about the pathological physiology of this condition, the most important factors of which are: progressive oligemia, decreasing cardiac output, decreasing blood pressure, anoxia and death. The syndrome may result from various etiologic factors, but it is most often caused by serious burns or other types of physical trauma.

At the site of the injury there is an outpouring of blood, plasma, or both, either to the outside world or into the surrounding tissues. If whole blood is lost to the outside world the circulating blood soon becomes diluted by the absorbed tissue juices. This dilution process is completed in from twenty to thirty minutes after the hemorrhage has been stopped. An examination of the blood at this time will reveal a low hematocrit, low hemoglobin, low red blood cell count, and low serum proteins. The sedimentation time will be correspondingly increased. If the circulating fluid is not lost to the outside world but is extravasated into surrounding tissues there is a proportionately greater loss of plasma than of red cells and hemoconcentration occurs. Examination of the circulating blood at this time shows an increase in the hematocrit, hemoglobin and red blood cell count and a decrease in the serum protein content. The same findings are present but to a greater degree following extensive superficial burns, for plasma alone is lost to the outside world, thus there exists an ideal mechanism for the development of hemoconcentration. As a result of this loss of circulating fluid a disparity develops between the volume capacity of the vascular system and the total volume of the intravascular fluid. This disparity will be increased by any increase in the volume capacity of the vascular system (capillary dilatation), or by any decrease in the total volume of the intravascular fluid (further loss of circulating fluid). It is well known that any significant decrease in the total blood volume is accompanied by a decreased cardiac output and a decreased volume flow. For a time the vasomotor system is able to compensate for this deficiency by means of arteriolar and venular constriction. Thus, the vital centers are supplied with blood but at the expense of the peripheral and less vital tissues. This decreased volume flow through the peripheral tissues results in anoxia of both the cells of the ordinary tissues and the cells of the capillary walls. Because of this damage the permeability of the capillary walls is increased and leakage of plasma into the surrounding tissues occurs. This increases the oligemia and, as a result, the disparity between the volume capacity of the vascular system and the total blood volume is proportionately increased. When the total blood volume is decreased to a critical point, vasoconstriction can no longer compensate for the decreased blood flow, so anoxia of the vital centers occurs. Once anoxia of these centers has continued long enough to do permanent damage, an irreversible stage of the syndrome develops in which replacement of the circulating fluid and all other known means of treatment are of no avail. This emphasizes two important points, first, the progressive and self-perpetuating nature of the syndrome, and second, the danger of allowing treatment to be delayed until the irreversible stage is reached.

As the syndrome progresses certain accompanying changes have been found to occur. These at times have been considered causative factors but are probably the result of secondary cell destruction and disturbance of cell physiology and metabolism. The acapnia, the decreased oxygen consumption, and the low metabolic rate are

probably the result of circulatory deficiency. The hyperpotassemia is probably the result of cell death and destruction. The low blood chlorides are probably due to leakage through the hyperpermeable capillary walls. The increased nitrogen waste products in the blood are the result of decreased kidney activity. The increased blood sugar is believed to be an adreno-sympathetic effect accompanying the heroic effort of this system to maintain an adequate blood pressure.

The increase in capillary permeability found in animals after destruction of the adrenal cortex and finally the development in these animals of a state very similar to hematogenic shock in man, has led some to believe that hematogenic shock is primarily due to underactivity of the adrenal cortex. This argument is strengthened by the fact that similar findings are present in cases of Addison's disease. Certainly the evidence is convincing enough that, for the present at least, adrenal cortical substance should be administered with the hope that an apparently irreversible state of hematogenic shock may show a favorable response.

To illustrate the progress that has been made in our understanding of hematogenic shock and to summarize the present-day concept of the pathological physiology, I wish to quote some definitions that were important in the past and some that are important today: Benjamin Travers (1826) defined hematogenic shock as "A species of functional concussion by which the influence of the brain over the organ of circulation is deranged or suspended." Gross (1872) said "Shock is a manifestation of a rude unhinging of the machinery of life." Minot and Blalock (1940) stated that "Shock is peripheral circulatory failure resulting from a discrepancy in the size of the vascular bed and the volume of the intravascular fluid." Harkins, in the same year, defined hematogenic shock as "An oligemia initiated by traumatic local fluid loss, either whole blood, plasma, or both; accompanied by decreased cardiac output, diminished volume flow, lowered venous pressure, decreased oxygen consumption, arteriolar vasoconstriction, acapnia, and secondary blood pressure fall; and perpetuated by a summation of these factors and possibly hyperpotassemia, increased generalized capillary permeability, anoxia, action of tissue metabolites and deficiency of adrenal cortical hormone.

Diagnosis

In the diagnosis of impending hematogenic shock the severity of the trauma, its duration, evidence of dehydration, history of exposure to cold and an estimation of the amount of blood or plasma loss are all important factors in deciding whether or not the injured is likely to develop shock. Determination of the hematocrit and serum protein content is helpful in watching the course of the syndrome but because of its progressive nature frequent blood examinations are necessary for adequate observation. This procedure is, of course, too time-consuming to be practical if a large number of injured people are to be cared for. It is important to correct a common impression that low arterial pressure is the first sign of hematogenic shock, for a blood pressure within normal limits may be maintained to within a few minutes before death. Weakness, dizziness, decreased acuteness of sensation, cloudy sensorium, subjective coldness, decreased body-temperature, cold moist ashen skin, low arterial pressure, sighing respiration, rapid pulse, and "tic tac" heart sounds are important clinical findings. Observation of the mental state, the appearance of the skin and estimation of the adequacy of the peripheral blood flow are the best clinical guides to the severity of the condition. A moist ashen skin accompanied by low arterial pressure and cold extremities means arteriolar and venular constriction secondary to a significant reduction in blood volume. In this stage, treatment is very necessary and unless the response is rapid, the prognosis is grave. On the other hand, the presence of low arterial pressure and a pale, warm or only slightly cool skin in a patient with no decrease in blood volume does not indicate a grave prognosis for the condition is due to vasodilatation and tends to recover spontaneously or responds favorably to vasoconstrictor drugs. Hematogenic shock must be differentiated from congestive cardiac failure, ectopic tachycardia, cardiac tamponade and sudden myocardial infarction.

Treatment

In the treatment of patients with extensive burns or other types of serious trauma, prevention of hematogenic shock is, of course, very important. This is effected largely by the prompt control of hemorrhage and the prevention of fluid loss from the skin or the gastrointestinal tract.

In surgical patients the prevention of dehydration pre-operatively and postoperatively is very important. Recent studies have shown that during major operations, the patients lose an average of 1000 c.c. of blood by hemorrhage and 1,460 gm. of water insensibly. Major manipulative and operative procedures during hematogenic shock are contraindicated, except when necessary to close sucking chest wounds or in those rare cases where such procedures are necessary to prevent further loss of intravascular fluid.

Once hematogenic shock has actually developed, prompt treatment should be administered. Even a few minutes delay may mean the difference between life and death to the injured individual. He should be kept as comfortable as possible. Immediate transportation to a hospital is very important. Early sedation, elevation of the feet and conservation of body temperature are indicated.

The application of excessive heat in an attempt to "warm up" the patient is contraindicated for it tends to cause peripheral vascular dilatation and thus defeat the protective effort of the vasoconstrictive mechanism. The administration of stimulants and vasospastics is of no value. Alcohol is definitely contraindicated. Adrenalin, so commonly used, is not only superfluous because the blood adrenalin is already high, but may do harm by causing excessive vasoconstriction of vessels supplying nourishment to the vital centers.

Fluids by mouth have no effect on the arterial pressure, but hot drinks, especially coffee, are advocated by some. Their value seems very questionable. Intravenous treatment with isotonic crystalloids (sodium chloride and glucose) is of little value because they soon leak out through the damaged capillary walls. Glucose, however, is of some value in protecting the liver against glycogen depletion and damage from toxins absorbed from burned tissues. Both these crystalloids may be dangerous because of their action in diluting the serum proteins and thus decreasing the osmotic pressure. Hypertonic crystalloids are of benefit early because of their favorable influence on intravascular osmotic pressure, but soon become dangerous because of the opposite effect after they have passed through the hyperpermeable capillary walls. Whole blood, plasma, ascitic fluid, concentrated human serum-albumin and synthetic blood substitutes administered intravenously are the most important part of the treatment. Plasma is considered preferable to whole blood in most cases, extreme hemorrhage and carbon monoxide poisoning being definite exceptions because of the need for functioning red blood cells.

The rate of intravenous administration of whole blood or blood substitutes will vary from 200 c.c. to 2,000 c.c. per hour depending upon various circumstances. In general the more rapidly the circulatory fluid has been lost, the more rapidly it should be replaced provided treatment is started promptly. Slower administration is indicated in patients with heart disease and in those where treatment has been delayed until blood dilution has occurred. Patients in shock should be closely watched, for too rapid intravenous administration is likely to cause further decline in circulatory efficiency. The optimal dosage of plasma or whole blood will vary with the individual case. Some may require only 500 c.c. while others may require several liters. Various formulæ have been advocated for estimating the required dosage of plasma.

The methods described by Black[1] and by Harkins[3] are simple and practical. With Black's method the plasma dosage in c.c. is determined by using the formula

$$X = \left(5 - \frac{500}{\text{Hb.}}\right) 1000.$$

With Harkin's method the calculated dosage for adults is 100 c.c. of plasma for every point the hematocrit is above the normal of 45. In cases with hypoproteinemia an additional 25 per cent is given for every gram of plasma protein level below 6 Gms. For children the dosage is calculated the same way but varied proportionately to the body weight, the average adult body weight being figured as 70 Kg. After the initial plasma administration, hematocrit determinations are made as frequently as clinical judgment indicates and more plasma is administered as needed. If facilities for hemoglobin or hematocrit determinations are not at hand, careful clinical observation of the general appearance, mental state, pulse, respiration and adequacy of peripheral blood flow will furnish ample indication of need for more plasma.

In the presence of extreme cardiac weakness where slow administration and small dosage is indicated the concentrated blood substitutes are

of course preferable. However, if severe dehydration is present, large amounts of concentrated blood substitutes are said to be contraindicated because of their tendency to further deplete the tissues of fluid.

Plasma albumins[2,5,6] obtained from domestic animals have been successfully used as blood substitutes in humans and in experimental animals. Further improvement in the quality of the material and in the efficiency of manufacture will be necessary, however before it can be extensively used.

Gum acacia (6 per cent) has approximately the same viscosity as plasma and for theoretical reasons should be of value. Actually, it is quite dangerous because of its antigenic properties and its tendency to be deposited in the reticuloendothelial system and cause damage to vital organs, especially the liver. However, if other blood substitutes are not available, it should be used as a life saving measure.

Isinglass, as a blood substitute, was first introduced by Taylor and Waters[8] of Toronto. In a recent personal communication, Dr. Taylor stated that they now have a much better preparation than that reported in their last paper. It has been used extensively on experimental animals and to date on more than fifty patients with no toxic effects. As a result of various tests and his clinical experience he believes it to be a very satisfactory blood substitute.

Pectin, as a blood substitute, was first introduced by Hartman, Shelling, Harkins and Brush.[4] Because of its availability, its simplicity of preparation, its high viscosity and osmotic pressure, the absence of pyrogenic and antigenic properties and because of the exceptional success which has accompanied its use in actual practice, it is probably the best synthetic blood substitute known.

Oxygen when used in conjunction with replacement of the circulating fluid is of value in combating the low oxygen consumption and tissue anoxia. It is best administered by means of an oxygen mask.

Adrenal cortical extract should be used especially in cases which have apparently advanced to the irreversible stage of the syndrome. Recent reports seem to indicate that desoxycorticosterone acetate is of no value. Eschatin on the other hand as used by Rhoads, Wolff, and Lee[7] apparently exerted a beneficial effect by decreasing the permeability of the capillary walls to the plasma protein molecule.

In summary, let me emphasize the importance of distinguishing among the different types of shock. The hematogenic type is the most important and may be initiated by any malady which causes prolonged oligemia and anoxia. Either of these factors no matter how produced causes the gradual development of the other. Thus a vicious cycle is established in which hematogenic shock becomes a self-perpetuating constantly progressive syndrome. Its prevention and treatment are concerned largely with the maintenance or reestablishment of adequate circulating intravascular fluid. This can be accomplished by the prevention of dehydration and the early administration of blood or blood substitutes to those patients with impending or fully developed shock.

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PHYSICAL FITNESS IMPROVED UNDER WAR CONDITIONS

The general physical fitness of American college men has improved under war conditions if the men studied by the department of physical education at Syracuse University are typical.

The average physical fitness score at the university this year shows a 23-point improvement over last year. This year's score of 114.2 is five points higher than the best for any year during which the record has been kept.

Out of every hundred men tested this year eighty-eight are as healthy or healthier than the average of those tested last year, the college records show.

The physical fitness rating is essentially an indication of strength. Final averages consist of scores made on tests of arm, leg and back power, hand grip and lung capacity.—*Science News Letter,* October 23, 1943.

Removal of excess joint fluid may be expedited by rest, a low sodium chloride-acid ash diet, and 6 grams daily of ammonium chloride orally in divided doses.

W.S.R.—*Detroit Medical News.*

Some Troublesome Problems in Circulatory Disease*

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Diseases of the circulatory system are generally well understood. Occasionally, however, difficult problems are encountered. Some of these troublesome problems are discussed. It is important to recognize and treat left ventricular failure. Muscular inactivity may be a factor in the production of edema. Chronic constrictive pericarditis, myxedema and emphysema of the lungs often simulate myocardial failure. Atypical angina pectoris may offer difficulty in diagnosis; the differential diagnosis and treatment of angina pectoris are discussed. Orthostatic hypotension and hyperactive carotid sinus reflex are discussed as circulatory conditions causing syncope. Finally the physical findings are described by means of which coarctation of the aorta is recognized.

■ The purpose of this paper is to discuss a number of circulatory conditions the recognition or management of which is often difficult or troublesome. The problems selected for discussion can be dealt with by ordinary clinical methods; special knowledge and techniques are not required. They include several of the features of cardiac failure and of angina pectoris, two circulatory disorders which cause syncope and finally coarctation of the aorta.

Congestive Cardiac Failure

Left Ventricular Failure.—One troublesome problem concerns the recognition of left ventricular failure as an indication for treatment for cardiac failure. All are familiar with the common clinical picture of congestive cardiac failure. The distended neck veins, the enlarged liver and the edema of the lower extremities are obvious. These are signs of failure of the right ventricle, although we have not been accustomed to think of them as such. We usually think of cardiac failure as failure of the whole heart, and it is true that in the more advanced stages the whole heart fails. In the earlier stages, however, the chamber which is subject to the greatest strain first shows signs of weakness.

Cardiac failure begins much more commonly with failure of the left ventricle than with failure of the right.[27] The strain is primarily on the left ventricle in hypertension, and in most cases of myocardial infarction and of lesions of the aortic valve. In many cases of arteriosclerotic heart disease the left ventricle fails first. Failure of the left ventricle causes passive congestion of the lungs. Their vital capacity is reduced. Fatigue and exertional or nocturnal dyspnea are the common symptoms. There are usually râles at the lung bases, and cardiac enlargement can often be detected. Auricular fibrillation may occur. Any two of these five symptoms and signs are indications for treatment for cardiac failure just as definite as edema and other signs of right ventricular failure. The treatment should include digitalis, a period of bed rest followed by restriction of activities, a low salt diet, and a reducing diet for those who are overweight.

Venous Return and Muscular Contraction.—The edema of cardiac failure is due in part to increased systemic venous pressure.[3,14,22,24] The return of venous blood to the thorax is accomplished chiefly by the intermittent pressure of muscles on the veins, the result of varying tone and of voluntary and involuntary contractions.[10,22] The importance of contraction of the muscles of the lower extremities in maintaining venous flow and preventing thromboses in postoperative surgical cases has been emphasized recently. Does this have any application to cardiac failure?

In cardiac failure any sudden increase of venous return to the thorax might be disastrous. After recovery from cardiac failure, however, edema of the legs sometimes returns if the patient sits quietly with his feet on the floor. Elevation of the feet, active contraction of the muscles of the lower extremities, and a little walking[22] help to prevent edema from this cause.

The Value of Hospital Management.—When should a patient be hospitalized for cardiac failure? Cardiac failure can be treated in the home but, like surgical operations, it can usually be managed better in the hospital. As a general rule, unless the arrangements at home are ideal, hos-

*From the Department of Internal Medicine of the University of Michigan Medical School. Read before the Section on Medicine, seventy-seventh annual meeting of the Michigan State Medical Society, Grand Rapids, September 25, 1942.

pitalization is indicated. Patients sometimes improve in the hospital when they have failed to improve at home under almost identical treatment. There are several explanations for this:—the relief from the emotional disturbances and problems of the home, the better management of the more complicated programs of diet and medication, and the enforcement of absolute bed rest. Too commonly the patient on bed rest at home goes to the bathroom and spends part of his time in a chair. A few patients do not tolerate bed rest, developing edema of the lungs and venous thromboses when confined to bed.

There are several conditions which simulate congestive cardiac failure, but which do not respond to treatment for cardiac failure. Correct diagnosis, then, is essential.

In *chronic constrictive pericarditis* the findings may resemble those of congestive failure due to mitral stenosis or arteriosclerotic heart disease or of cirrhosis of the liver. Some of the features of constrictive pericarditis which aid in the diagnosis are as follows. In spite of tremendous edema and shortness of breath upon exertion these patients can often breathe comfortably while lying flat. The apex impulse is frequently felt as an early diastolic shock accompanied by a protodiastolic gallop sound. The pulse is sometimes paradoxical, weak during inspiration and stronger during expiration. The systemic venous pressure is greatly increased above the normal, and yet the heart is seldom appreciably enlarged. A careful physical examination usually leads to the correct diagnosis. X-rays often yield valuable information, showing deposits of calcium in the pericardium or diminished cardiac pulsations. Finally electrocardiograms sometimes fail to show the changes in the electrical axis which occur normally upon change of posture, but this is not often decisive diagnostically. Chronic constrictive pericarditis does not usually respond to medical treatment and pericardiectomy must often be performed.

Myxedema sometimes leads to dilatation and failure of the heart resembling in most respects the congestive failure of arteriosclerotic heart disease.[5] The cardiac complications may dominate the picture and the myxedema may not be recognized. Like the other manifestations of myxedema, the cardiac complications respond in a very gratifying manner to thyroid administration, but not to any other form of treatment. It is essential then that the myxedema be recognized. In the treatment, it is usually better to give relatively small doses of thyroid, as large doses sometimes cause anginal pain and are often not well tolerated in other respects.[23]

Emphysema of the lungs may lead to cor pulmonale, but it sometimes causes shortness of breath and edema of the lower extremities in the absence of demonstrable abnormality of the heart.[12,13] It is important to determine if the heart is affected and this usually requires the aid of the x-ray and electrocardiogram.[19] Digitalis does not help, it may even be harmful, unless the heart is abnormal.

Nephritis with edema and nutritional edema are not likely to give difficulty in diagnosis.

Angina Pectoris

Atypical Angina Pectoris.—The recognition of angina pectoris when it is atypical and the differentiation of non-cardiac conditions causing pain like that of angina are problems which are sometimes exceedingly troublesome.

The characteristic symptoms of angina pectoris are well known. The substernal location of the pain, its frequent radiation to the left shoulder, arm or neck, and its relation to exertion and emotion are important. Slight discomfort or oppression, if otherwise characteristic, is just as significant as severe pain.

Some patients have atypical symptoms or do not describe them in the usual way. The pain may be atypical in its location, radiation or relation to exercise. The diagnosis may be in doubt. In such cases it is often helpful to reproduce an attack. This may be done by having the patient exercise or smoke if this brings on the pain, or by having him breathe an atmosphere poor in oxygen,[21] or by the administration of epinephrine subcutaneously.[15] The reproduction of the pain by any of these methods points strongly to its anginal nature. Electrocardiograms should be taken, if possible, before, during and after the pain. The appearance during the pain of transient changes resembling those of acute myocardial infarction is further evidence that it is anginal.[20] The failure to demonstrate such changes does not rule out angina pectoris. Furthermore the changes should be pronounced to be significant as minor changes may be produced in normal individuals by the methods mentioned.

Reproduction of anginal pain by any of these methods and especially by epinephrine is accompanied by a small risk of death or other serious consequences. They should not be employed unless the diagnosis remains in doubt after careful examination and the use of other diagnostic measures. The risk involved in reproducing the pain is less, however, than that entailed by the failure to make the correct diagnosis and to institute the proper treatment. When inducing the pain it is well to have nitroglycerine at hand and to use it if the pain is severe or prolonged.

Conditions Simulating Angina Pectoris. — There are several conditions which give rise to symptoms resembling in many respects those of angina pectoris. Intrathoracic tumors and aneurysms are recognized by careful examination and x-ray. Disease of the biliary tract can usually be recognized by observation of an attack and by means of the x-ray. Disease of the esophagus —spasm, ulcer or diverticulum—may cause pain similar to that of angina;[4] the pain is likely to be related to swallowing and the disorder can often be shown by the x-ray. Pain caused by spasm in the biliary tract or in the esophagus is sometimes relieved by nitroglycerine, so that the response to this drug is not completely specific.

Arthritis of the cervical spine sometimes causes pain over the precordium and in the arm.[9,18] The pain may be felt in the interscapular region, too, but not beneath the sternum. It may be brought on by exertion of some particular type or by certain movements of the spine, especially inclining the head laterally with the neck in hyperextension. Reproduction of the pain by this maneuver while the patient is at rest suggests its spinal origin. Furthermore the pain is not brought on by emotion. Usually there are sensory changes and there is sometimes tenderness over the articulation of the posterior articular processes of the 7th cervical and 1st thoracic vertebræ. X-rays often demonstrate disease of the spine, usually hypertrophic arthritis.

Treatment.—The treatment of angina pectoris is based on three fundamental facts. First, the pain of angina is an expression of inadequate coronary circulation, usually the result of arteriosclerotic narrowing.[2] Second, the occurrence of the pain carries with it the threat of injury to the myocardium, of abnormal cardiac rhythm and of sudden death. Finally, while the sclerotic narrowing is progressive and irreversible, it is irregular or patchy in distribution so that it is often possible for a collateral circulation to develop.[1]

The purpose of treatment is to prevent the pain or to relieve it promptly when it occurs, to protect the heart from injury and to promote the development of a collateral circulation. While the patient's activities should, if possible, be restricted so as to avoid bringing on the pain, it is often advisable for him to indulge in such physical activity as he tolerates without pain; walking, golf and mild exercise of other types are to be encouraged if they do not cause symptoms. The reason for this is that a collateral circulation is more likely to develop if there is a demand for it, and exercise as tolerated increases the demand. If the patient cannot avoid some effort which is likely to bring on the pain, he should take nitroglycerine immediately before the exertion in order to prevent the pain. If the pain occurs he should stop and rest and take nitroglycerine in order to relieve it promptly. Theophyllin is indicated, it dilates the coronary arteries and increases the tolerance for exertion. Distention of the stomach is accompanied by a reduction of coronary blood flow,[6,7] and for this reason large meals are to be avoided and exertion soon after meals. Those who are overweight should reduce gradually by diet until somewhat underweight; this reduces the work of the heart materially. These measures are often sufficient.

Sometimes, however, a more drastic restriction of activities is necessary, or even a period of bed rest. Absolute bed rest for several weeks, just as in acute myocardial infarction, is indicated (a) at the very onset of the symptoms of angina, (b) whenever the pain becomes suddenly much more severe or more easily induced, or (c) whenever there is prolonged pain not relieved by rest or nitrites even though not accompanied by signs of myocardial infarction such as fever, leukocytosis, pericardial friction or electrocardiographic changes. In other words the patient is treated very much as though he had acute myocardial infarction, including prolonged bed rest, whenever there is sudden development or sudden increase in the degree of coronary narrowing. The reason for this, of course, is that it may be possible to protect the heart from injury or to prevent myocardial infarction while a collateral circulation is developing.

Alcohol injections and surgical methods for

interrupting the nervous paths through which the pain is transmitted are rarely indicated. When they are indicated, however, by the failure of more conservative measures to give relief from intolerable pain, they usually give very gratifying results. They relieve the pain, but it is doubtful if they alter the underlying disease mechanism.

Conditions Causing Syncope

The occurrence of fainting attacks sometimes gives rise to very troublesome problems in diagnosis.

Orthostatic Hypotension.—Because orthostatic hypotension is relatively uncommon, it often is not recognized. Its recognition, however, is not difficult, and simple treatment is usually effective.[25] The patients suffer from weakness, faintness or giddiness upon standing. Often they collapse and lose consciousness. Prompt relief occurs upon lying down. The condition is recognized by finding a pronounced fall in both systolic and diastolic blood pressures when the patient changes from the recumbent to the erect posture. A slight drop may occur in normal individuals and is not significant. As a rule the pulse rate does not increase as it does normally. The condition is often associated with tabes dorsalis or other disease of the nervous system. There is failure of the normal sympathetic vasomotor reflex to cause constriction when the subject stands. Treatment gives complete relief in many cases. Small doses of paredrine, ephedrine sulfate or benzedrine sulfate are often effective. Elevation of the head of the bed on a chair so that the whole bed slants, the so-called "head-up" bed, also is usually helpful.[17]

Hyperactive Carotid Sinus Reflex.—In normal subjects mechanical stimulation of the carotid sinus produces either no fall in the systemic blood pressure or a fall of less than 10 mm. Usually there is little or no slowing of the heart. In patients with hypertension or arteriosclerosis these responses are more common and somewhat more pronounced. In a few individuals the carotid sinus reflex is hypersensitive. They complain of spontaneous attacks of dizziness or fainting, often without warning. In these patients pressure upon the carotid sinus induces dizziness, fainting and, if sufficiently strong or prolonged, convulsions.[26] Stimulation of the carotid sinus causes three types of response: (a) sudden, marked cardiac slowing or standstill with or without a fall in blood pressure, (b) pronounced fall in blood pressure, and (c) disturbances in cerebral circulation without cardiac slowing or fall in blood pressure.[26] Some patients, but not all, have aneurysmal dilatation of the sinus or a tumor pressing upon the sinus, but these are not the sole causes of hyperactivity of the reflex. A systolic murmur over the vessel is heard in some cases.

In many of these patients the symptoms are produced by some definite cause of pressure upon the region of the carotid sinus, such as wearing a high, tight collar, a wifely embrace, massage of the neck by the barber in applying the after-shave lotion, et cetera, although the patient may not be aware of the relation of the causative agent to his fainting. These causative agents should be avoided. Some patients are relieved of their symptoms by atropine or belladonna, which abolishes the cardiac slowing but not the fall in blood pressure. Epinephrine abolishes both effects. In some cases surgical section of the carotid sinus nerve or denervation of the sinus is indicated.

Stokes—Adams Syndrome.—There is evidence suggesting that in some patients with fainting due to pronounced slowing or standstill of the ventricles accompanying heart block the attacks are due to hyperactive carotid sinus reflex rather than to organic changes in the His bundle.[26]

Coarctation of the Aorta

Coarctation of the aorta is a rare condition. It causes hypertension in the upper extremities and upper part of the body.[11,16] The hypertension is recognized, but often not the underlying coarctation of the aorta, and the patient is sometimes regarded as having essential hypertension. Now that operations are being performed for essential hypertension in young individuals it is especially important that these cases of coarctation be recognized.

If the examiner would routinely palpate the femoral and dorsalis pedis and posterior tibial pulses, at least in all patients with hypertension, he would find a few cases in which these pulses were very weak or imperceptible. Further investigation would then reveal in some of these cases other signs characteristic of coarctation. Some-

times the pulsation, thrills and murmurs over the collateral circulation, which is by way of the internal mammary and intercostal arteries and the arteries about the scapulæ, give the first clue to the correct diagnosis. There is often an appreciable lag of the femoral as compared with the radial pulse.[16] Occasionally the roentgenologist recognizes in a chest film the irregularity of the lower edges of the ribs due to erosion by the enlarged intercostal vessels, sometimes accompanied by slight enlargement of the heart or abnormality of the aorta; he may then make the diagnosis when it was not suspected clinically. In some patients, especially youths, the x-ray findings are meager or absent. The cardiac manifestations like the changes in the small arteries of the eye grounds and elsewhere are much less pronounced than in essential hypertension.[8] A careful examination should lead to the correct diagnosis. Treatment, if indicated, is like that of essential hypertension, but splanchnicotomy is probably not indicated.

Summary

Several troublesome problems in circulatory disease have been discussed. They can be dealt with by ordinary clinical methods. The subjects discussed include some of the features of cardiac failure and of angina pectoris, two circulatory disorders which cause fainting attacks, and coarctation of the aorta.

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GRANT OF $75,000 MADE TO AID WAR MEDICINE

A grant of $75,000 has just been made for collecting up-to-the-minute information on war medicine and making it available to members of the medical profession. The money is provided by the Johnson and Johnson Research Foundation to the National Academy of Sciences and the National Research Council.

This grant is made to help overcome one of the greatest difficulties in medicine today: that of providing adequate current information to the medical officers of the armed services both in this country and abroad, and of making the experiences of war medicine available to civilian physicians.

The project will be administered by the Division of Medical Sciences of the National Research Council, under the chairmanship of Dr. Lewis H. Weed. Various medical reports, both civilian and military, from all parts of the world will be culled for pertinent information. Bulletins containing current advances in medical practices and medical research which are not military secrets will be issued. Studies which cannot be released now will be carefully held for later release.—*Science News Letter,* October 23, 1943.

Congenital cysts are developmental errors. The sublingual and submental or mental regions which form the floor of the mouth are built up from so many embryonal structures that deformity is likely to occur in regions of such intense activity. W. H. JOHNSTON, M.D., *Annals of Otology, Rhinology and Laryngology.*

Present-Day Concepts of the Use of Digitalis*

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This paper considers the classification of preparations of digitalis according to their chemical state; the mechanisms of action of digitalis; the indications and contraindications according to the type of cardiac disease, the degree of failure and the rhythm which is present, and the principles and methods of administration of digitalis.

You are all familiar with the uses of digitalis. Nevertheless, it may be worthwhile to review the subject because in the last few years there have been numerous additions to our knowledge of the chemical composition and inter-relationships of various types of preparation of digitalis, its mechanisms of action, the indications and contraindications for their use, and their dosage. It is my purpose to present a brief summary of current views on these aspects of therapy with digitalis.

The whole leaf of Digitalis purpurea, the plant from which most preparations of digitalis are made, contains only 1 per cent of materials which act upon the heart. The remainder consists of saponins and other impurities. By means of certain chemical processes substances called glycosides may be obtained. These are the cardioactive principles of digitalis. The glycosides of Digitalis purpurea are named digitoxin, gitoxin, and gitalin. Aside from the powdered digitalis leaf and the tincture which are prepared from the whole leaf, most "purified" preparations of Digitalis purpurea are mixtures of these three glycosides. The proportion of each depends on the particular chemical method employed. "Digalen," "Digifortis," "Digitan," "Digifolin," "Digitora" and others are mixtures of this type. The exact amount of each glycoside in such mixtures cannot be determined readily because of the great difficulty of separating and isolating them. Therefore, the potency of each "batch" of the material used in the preparation of tablets and ampoules must be determined by one of the methods of bio-assay. "Digitaline Nativelle" on the other hand is, in all probability, pure crystalline digitoxin and, since its composition is practically constant, bio-assay is not necessary and the dosage is expressed in milligrams instead of in cat or frog units. "Verodigen" is probably pure gitalin and its dosage may likewise be expressed in milligrams.

Digitalis lanata, another plant of the digitalis family, has been studied extensively recently. It yields its glycosides more easily than Digitalis purpurea so that milder chemical processes may be used. They precipitate as a mixture of three crystalline glycosides, Lantosides A, B, and C. These so-called "genuine" glycosides contain an extra sugar and acetyl group. If these are removed, Lanatoside A becomes digitoxin, Lanatoside B becomes gitoxin, and Lanatoside C becomes digoxin, a glycoside not present in Digitalis purpurea. In contrast to the mixtures of the latter plant, the glycosides of Digitalis lanata may be separated from each other by comparatively simple processes. In this manner it has been determined that the percentage of each fraction is essentially constant in different lots of the powdered leaf. Therefore the mixture is of constant composition and potency, and bio-assay is unnecessary. The mixture is marketed as "Digilanid," and the Lanatoside C fraction as "Cedilanid."

The glycosides of digitalis, strophanthus, squill and a number of other substances with a digitalis-like action are closely related in chemical structure. They all possess a fundamental similarity in their action upon the heart, but differ considerably in the degree, rapidity, and persistence of action.

Turning next to the mechanism of action of digitalis, it is now believed that this is due chiefly to a direct effect on the cardiac muscle. It causes the heart to contract more forcibly resulting in an increased output at each stroke. The ventricles are emptied more completely and therefore the size of the heart tends to decrease. Because the smaller heart consumes less oxygen and other materials and is able to put out more blood, its mechanical efficiency is increased. The congestion caused by back-pressure behind the failing heart is relieved, and the clearing of pulmonary and

*Read at the seventy-seventh annual meeting of the Michigan State Medical Society, Grand Rapids, September 25, 1942.

peripheral edema decreases the load under which the heart is laboring. In auricular fibrillation or flutter an additional action is the interference with conduction of impulses between the auricles and ventricles. This is due partly to stimulation of the vagus nerve, and partly to a direct depressing action on the auriculoventricular bundle. Some of the weaker impulses are blocked and so the heart slows. Another factor in the slowing is the direct action of digitalis in decreasing the irritability of the ventricular muscle so that it does not respond to some of the impulses which may escape the blocking action upon the A-V bundle. However, the most important factor in the eventual slowing to a normal rate is achieved indirectly through the improvement in the function of the myocardium caused by the direct stimulating effect of digitalis. The old concept which considered that the blocking action of digitalis was its important effect and that, because of the consequent slowing, the heart was enabled to recover from a state of failure, offered no valid explanation for the relief of cardiac failure which occurs in cases in which a regular sinus rhythm is present, and in which improvement may occur in the absence of appreciable cardiac slowing. It was responsible for the erroneous idea that still prevails among some physicians that digitalis is of benefit only when auricular fibrillation is present.

There have been some changes, too, in our ideas concerning the indications and contraindications to the use of digitalis. First, let us consider the influence of the degree of impairment of cardiac function upon our decision as to whether digitalis is indicated. For many years the presence of heart failure characterized both by pulmonary congestion due to failure of the left ventricle and by venous engorgement, hepatomegaly, ascites, and peripheral edema due to failure of the right ventricle has been known to be an indication for the use of digitalis. It has been known for some time that it is beneficial also when the signs are entirely or predominantly those of failure of the left ventricle. Such patients may be relieved of attacks of paroxysmal nocturnal dyspnea. It is now generally considered to be advisable to administer digitalis to patients who show no findings of frank congestive failure of either ventricle but whose cardiac reserve is limited to such an extent that dyspnea is caused by activities which are necessary particularly from an economic standpoint. This should not be interpreted as meaning that digitalis is a substitute for careful regulation of a patient's activities so that he stays so far as it is possible within the limits imposed by his cardiac disease. However, many of these patients are able to lead more useful and enjoyable lives when digitalis is given to them. Since the chief manifestation of diminished cardiac reserve is dyspnea, and since dyspnea is a subjective sensation which may be caused or modified by several factors other than cardiac disease—namely, general lack of physical fitness, obesity, anemia, pulmonary disease, and concomitant cardiac neurosis, the physician, before using digitalis, must carefully evaluate the symptom of dyspnea and be certain that cardiac disease is present and accountable for at least part of the dyspnea. If no benefit is obtained, after the patient has received an amount which should satisfactorily digitalize him, it should be stopped. Dr. Henry A. Christian has gone a step further in recommending its use in adults who have no limitation of exercise tolerance but whose hearts are either enlarged or may be expected to become enlarged due to the presence of hypertension or valvular lesions. It is his clinical impression that digitalis tends to prevent or retard the process of cardiac enlargement with its disastrous sequelæ. This is difficult to prove, and so cannot be considered as a definitely established use for digitalis.

Next let us consider the indications and contraindications according to the etiologic types of heart disease. In the presence of some degree of impairment of myocardial function, digitalis is useful in most instances regardless of etiology. While, at one time it was agreed that only certain types were benefited, it is now well established that patients with arteriosclerotic, hypertensive, rheumatic, syphilitic, and other less common types of heart disease are all helped to some degree and should receive digitalis unless some contraindication exists. In the presence of acute myocardial infarction digitalis should be used only when a considerable degree of failure is present or is threatened by some special circumstance such as the co-existence of rapid auricular fibrillation, flutter, or auricular tachycardia. It must always be given with especial care. Acute rheumatic carditis, myocardial involvement associated with various other acute infections, and thyrogenic heart disease should be treated in a

similar fashion. Digitalis is contraindicated when diphtheritic myocardial degeneration is present. When the heart is compressed by a large pericardial effusion or by constricting sheaths of fibrous or calcified tissue its output is decreased, and the further drop in output which digitalis may cause in a normal or smaller-than-normal-sized heart may have serious consequences. In "beriberi heart disease" and in the infrequent instances of myxedema in which cardiac failure is due to the myxedema and not to associated types of heart disease, digitalis is not beneficial; thiamin and other members of the vitamin B group should be used in the former, and thyroid extract in the latter.

In speaking of the indications and contraindications according to the cardiac rhythm, I am assuming that some degree of failure is present and am limiting this discussion to the influence of the cardiac rhythm upon the use of digitalis, not in the treatment of the arrhythmia *per se,* but in the treatment of the associated cardiac failure. As mentioned before, the direct action of digitalis upon the myocardium is its most important action. It follows from this that it is useful practically regardless of the cardiac rhythm. Whether sinus rhythm, auricular fibrillation, auricular flutter, auricular tachycardia, or permanent complete heart block is present digitalis may be expected to help in the alleviation of associated cardiac failure. Partial heart block was once thought to be an absolute contraindication because of the danger of increasing the degree of block and converting the partial block to a complete one. While this can occur, nevertheless in many instances the impaired conduction depends upon changes in the myocardium due to the failing circulation, and by improving this digitalis may cause the block to disappear. Therefore, when it is certain that the block is not due to an excess of digitalis, and when cardiac failure demands its use, the patient should be gradually digitalized, with frequent observations of the cardiac rate. The presence of ventricular tachycardia contraindicates the use of digitalis because of the danger of its inducing ventricular fibrillation.

In regard to the dosage of digitalis, it must be emphasized from the start that this is a matter to be decided largely by the response of the individual patient. For a considerable number of years it was thought that it was always desirable to employ as large a dose as the patient could tolerate, and that to determine this one should give the drug to the point of early toxic symptoms. The present view at which Withering himself finally arrived, is that a patient may do equally well with more moderate doses, and that the optimal level is best determined by looking for the appearance of favorable effects upon dyspnea, heart rate, edema, urinary output, et cetera. This should not be interpreted as endorsing the use of small or "tonic" doses, but rather that the effective level of saturation of the heart muscle may be lower in some patients than in others, and that one should therefore employ optimal rather than maximal doses. In general, the greater the severity of failure, the more digitalis is required, and in very severe failure it may be necessary occasionally to follow the old rule of giving the drug to the point of early toxic symptoms. The more severe or active the myocardial damage the lower will be the level at which toxic effects from digitalis may occur. Fortunately, the severity of failure frequently does not parallel the severity of myocardial damage, as in the case of recent myocardial infarction without much cardiac failure, or conversely, in that of a patient with hypertensive heart disease who recovers from severe failure and whose myocardial function remains comparatively good for a considerable number of years. Therefore, these two factors, the severity of failure and the severity of myocardial damage, must be considered separately in gauging the required dose.

You have all read reports and probably have had cases which demonstrated the greater potency of digitalis assayed according to U.S.P. XI standards as compared with U.S.P. X. The former is about one and one-half times more potent. U.S.P. XII digitalis will be intermediate in potency. The average amount of U.S.P. XII digitalis for full digitalization in adults is 18 grains. In the majority of instances patients should be digitalized gradually, and when appreciable amounts of digitalis have been taken during the preceding two weeks a gradual method must always be employed. One to 2 grains are given three times a day until therapeutic response or toxic effects appear. When, after deducting about 1 grain for each day of therapy to allow for the excretion or using up of this amount, the amount calculated as remaining in the body reaches 18 grains, the average patient will be completely digitalized. Some patients will be digitalized before

this amount is given. Others will require somewhat more. However, when and if 18 grains has been given in addition to amounts deducted to allow for excretion and destruction, one should be especially watchful for toxic effects and, if therapeutic results have not appeared, should begin to suspect that some factor opposing the action of digitalis is present. Such factors include marked myocardial damage, usually indicated by a considerably enlarged heart or a long history of cardiac failure; hyperthyroidism; the presence of fluid in the pleural or peritoneal cavities; and active rheumatic myocarditis. The amount required for maintenance also varies among individual patients, but will average about 1¼ grains daily with U.S.P. XII digitalis.

When the patient's failure is very marked and when he has not received digitalis in the preceding two weeks, more rapid digitalization is indicated. Here one must choose between oral and intravenous therapy. The essential difference in results obtained is that the initial effects from digitalis which is given intravenously appear within five to fifteen minutes, whereas the effects from large oral doses of most preparations appear in about three hours. The full effect by either route is attained at about the same time, somewhere between twelve and twenty-four hours. It is quite infrequent that this difference in initial action is a deciding factor in the patient's recovery, and intravenous therapy is further militated against because it carries a greater risk of toxic reactions.

In regard to methods of rapid digitalization by the oral route, the following suggestions are made. Using U.S.P. XII standards, the full digitalizing dose of Digitalis purpurea preparations will be about 18 grains in the average adult. From one-third to one-half of this amount may be given as the initial dose. This may be followed by doses of 2 or 3 grains every six hours until the therapeutic effects or toxic symptoms appear, or until the amount totals 18 grains. From this point on the rate of administration should be slower because one is near the full dose and also because the six-hour interval does not allow sufficient time for the full therapeutic and toxic effects of the preceding dose to develop. There is, therefore, some danger that overdosage may result if this rate of administration is continued. In the average case, one to one and one-half grains given three times daily is a reasonable rate for a continuing dosage in these cases. It should be emphasized that patients digitalized by this method must be watched carefully, especially during the first twenty-four to forty-eight hours, toxic symptoms inquired about and preferably the patient examined before each succeeding dose is given. If one desires to use "digilanid" the initial dose is from seven to ten tablets, followed by two to three tablets every six hours. Although exact comparisons of potency cannot be made, about twenty tablets of "digilanid" constitute an average full digitalizing dose. The same precautions and "tapering off" scheme should be used. "Cedilanid" may be given in an initial dose of 4.0 mg., which is equal to eight tablets, and continued in a dosage of 1.0 mg. every six hours as described above. The full digitalizing dose for cedilanid lies somewhere between 8-10 mg. When one considers that from 1.6 to 2.0 mg. constitute a full digitalizing dose when cedilanid is given intravenously, it is apparent that much of its activity is lost during the process of absorption from the gastro-intestinal tract. Gold† has recently described a single-dose oral method using 1.26 mg. of digitaline nativelle. His patients responded rapidly and experienced very few toxic symptoms.

While most digitalis preparations may be given subcutaneously or intramuscularly, the intravenous route is preferred because of quicker action, and because it may be irritating when given by the two former routes. In the cases in which intravenous digitalis therapy is deemed necessary and in which Digitalis purpurea or mixtures of the purpuræ glycosides are to be used, the initial dose should be from 4 to 6 cat units accompanied, if possible, by an oral dose of 2 to 3 grains. Due to unavoidable inaccuracies in bio-assay methods, individual variation in the requirements and tolerance for digitalis, and the rapidity and completeness of the action of digitalis which is given intravenously, it is not advisable to continue intravenous doses of these preparations up to the level of full digitalization. Therefore, it is recommended that after the initial intravenous dose, a program of oral digitalization should be instituted continuing with doses given every six hours as previously described. In general, because of the greater accuracy in measurement by weight of crystalline material it is preferable to use such

†Gold, H.: Studies on purified digitalis glycosides. IV. The single dose method of digitalization. J.A.M.A., 119:928, (July 18) 1942.

(Continued on Page 923)

Political Medicine

Thoroughly discussed at the 78th Annual Session of the Michigan State Medical Society and its excellent Postgraduate Conference on War Medicine, which I am sure was enjoyed and proved scientifically profitable to the 1713 Doctors of Medicine who attended, was the Wagner-Murray Bill (S. 1161) to provide medical care by the government.

While we are fighting a harsh and bitter war to preserve our democracy and the American way of life, the Wagner-Murray Bill would make one man in Washington, D. C., the dictator of the health of 110,000,000 people in these United States. This one man would become the absolute czar of medicine. His job would be to develop and maintain the most gigantic bureaucracy that this country or the entire world has ever known. He would be given $3,000,000,000 initially to implement the scheme.

$3,000,000,000 is enough money to hire every doctor in America at a salary of $5,000 a year; to hire every bed in every privately operated hospital every day in the year at the rate of $5 a day; to pay $2.50 a day every day in the year for each bed in government-owned hospitals; to spend over $250,000,000 a year for medicine and supplies, and still leave $500,000,000 for political jobholders.

If ever there was a time in the history of organized medicine in Michigan, it is now that we need a solidarity of our membership. It is a time to lay aside petty local grievances and utilize every means we have to combat this foreign, sinister scheme against American Medicine—and against every one of us who practices medicine.

Now that we are aroused, let us inform the people and redouble our efforts to defeat the Wagner-Murray Bill in our national Capital.

C. R. Keyport

President, Michigan State Medical Society.

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President's



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EDITORIAL

NOT "TOO LITTLE AND TOO LATE"

■ One important lesson we should learn from the obstetric-pediatric program is that it is too late to forstall or influence a service program if we wait until it has been written into the acts of Congress. We must not be lulled into passive quietude by statements that the Wagner-Murray-Dingell bill does not have a chance to pass. That is just the attitude the proponents of socialism wish. When that comes, a bill or bureaucratic order will be issued, and it will be too late.

We must be on guard, and must express our opinions to our legislators.

TRENDS AND A LITTLE HISTORY

■ Do you remember not many years ago there was a long report on the Costs of Medical Care? Some of us were somewhat disturbed by its implications, but these soon passed, and life went along as before. Time passed. Then came Senator Wagner and his bill of a few years ago. The American Medical Association was concerned and called a Special Session of the House of Delegates, the first ever to be called.

That session and its aftermath of political activity of the members of the medical profession and their friends stayed the hand of the mighty and his bill died. But not for too long. Soon there began to appear news items, special articles by columnists and feature writers in the press and the popular magazines telling all and sundry what awful people the doctors of medicine were. The picture was grim, and practically all the articles were of the "anti" strain. Stories and special articles favorable to the profession were conspicuous by their absence. The bogey of the great Medical Trust of Chicago was ever present. The tight association of the members to control practice and plans was presented in an unlovely aspect.

Then came the charges against the American Medical Association, The Medical Society of the District of Columbia, and certain officers. A Grand Jury was called and charges made therein. But this was a strange Grand Jury. A Grand Jury is supposed to hold secret deliberations and sift charges to find out whether there is sufficient evidence to warrant a trial. The defendant is not allowed to appear; in fact, is not supposed to know that there is any action being taken. But during that Grand Jury investigation the prosecuting officers went up and down the country telling what dreadful things they were "proving" against the medical profession in the Grand Jury. Then came the indictment and later the trial before juries that could be nothing else but prejudiced after all the adverse publicity.

There was a verdict, an appeal and a final verdict from the Supreme Court of the United States. Considering the charges, the penalty was ridiculously small—$2,500, and was paid. That verdict took the life and pugnaciousness out of the American Medical Association. It found that under its organization its activities are very much restricted. They cannot enter into many of the activities that we wish. For instance, the profession, as expressed at the House of Delegates of the AMA last June, wishes a bureau of information at Washington, and some activity along certain economic lines, but that cannot be.

The organized medical profession, as represented by its great society, was curbed, but the time was not yet quite ripe! What of the practicing part of the profession? Congress placed a rider on a vital emergency appropriation bill providing the means to find out how far the profession was prepared for the ultimate slaughter. The perfect trial balloon would be a measure that looked ultrapatriotic and ultraappropriate, a measure to which there could be no objection without placing the objectors in a position of being disloyal to the war program. The maternal-pediatric aid to families of enlisted men was ideal for the purpose. And many of the states adopted the measure without stopping to think what might be the hidden motive or what the final result would be. But some state medical societies asked to be shown. When "thirty-seven or thirty-eight states" had accepted, a majority of the profession was placed in the position of accepting an invasion of their very right to independent practice, and the time was ripe for the grand coup.

On June 3, 1943, Senator Wagner introduced

his bill, No. S. 1161, the so-called Wagner-Murray-Dingell bill. This bill will definitely put an end to the private practice of medicine in the United States. And why should it not be passed and put into effect? It has been demonstrated that the profession can be cowed. It can be made to appear as a monster to the people, can be convicted in the courts as a business union in restraint of trade, can be made to accept without too much opposition an invasion into its sacred right to practice medicine in the American way as free individuals. The next step is simply one of extending what has already been accomplished. That step may not be taken just at this time, but the stage is set, and the trap ready to spring.

What to do?

"We now know the intent of Congress," as Dr. Edward Dailey of the Children's Bureau told the Council at Detroit, Thursday, September 23, 1943. The intent of Congress should be the intent of the American people, and we believe the American people are not yet ready to be led into bondage, if they know what is happening. It is our duty and privilege to tell them just what is happening, and what is in store for them. Publicity kills subversive moves. We must tell our story at every opportunity, and we must make those opportunities. One of our County Medical Societies has prepared a model letter to be written and sent to twenty-five personal influential patients by every member telling the story of the Wagner-Murray-Dingell bill. That is leadership of a constructive nature. We need more of it.

In opposing the administration of the obstetric-pediatric service as being forced upon us by the Children's Bureau, we are not opposed to this service being provided. These women and children are our own patients, our own people, and we believe they are entitled to even more than is contemplated by the bureau. A surgical operation or a protracted illness is just as much a catastrophy to these families' financial status as the birth of a baby, and the same aid should be provided. But to have offered all such service at once in the manner now being enforced by the Children's Bureau would have been too obvious an invasion of the time-honored practice of medicine in the American way. The profession wants to and will help, even if it is necessary to render this service without cost. It would be plainly insane to oppose the rendering of this service, because these families will be our patients for the rest of their lives, and we wish for them only the best of service. That is what we are trying to render. We have suggested ways and means to provide for this help, and more help, but our method was refused by the Bureau. We believe we are not called upon to sacrifice our professional birthright in order that dreamers may operate a plan that bears the earmarks of Naziism.

PRESIDENT

■ Claude R. Keyport, M.D., of Grayling, is President of the Michigan State Medical Society. He was inducted into office, September 22, at Detroit. Dr. Keyport succeeds to the presidency during a period in medical progress and medical evolution that will call for the utmost in leadership and counsel. Problems of profound importance must be decided. His apprenticeship has been such that we look for true statesmanship. He was selected because of his qualities and we look forward with confidence.

PRESIDENT-ELECT

■ Andrew S. Brunk, M.D., who has practiced medicine since 1909, came to Michigan in 1923 opening a surgical hospital on Martin Place. He has always been keenly interested in organized medicine, and has served as President of Wayne County Medical Society and as Councilor for that district of the Michigan State Medical Society. He has been chairman of the Council for three years of intense activity and has rendered ungrudging service. He was a member of the Executive Committee during the formation period of Michigan Medical Service and has been on that board throughout its existence, also serving as chairman of the Medical Advisory Committee and on the Executive Committee.

In addition, he has served on the board and executive committees of Michigan Hospital Service.

His opportunities of service have been many, always accepted willingly and always fulfilled in a most satisfactory manner. We expect for him a satisfying term as President of the Michigan State Medical Society.

Officers Elected at Detroit Meeting



A. S. Brunk, M.D.
Detroit
President-elect



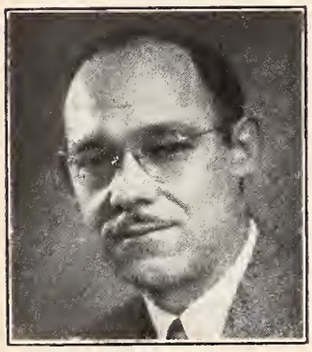
V. M. Moore, M.D.
Grand Rapids
Chairman of the Council



Otto C. Beck, M.D.
Birmingham
Vice Chairman of The Council



R. S. Morrish, M.D.
Flint
Chairman of Publications Committee



E. F. Sladek, M.D.
Traverse City
Chairman County Societies Committee



C. E. Umphrey, M.D.
Detroit
Chairman Finance Committee



E. R. Witwer, M.D.
Detroit
Councilor 16th District



A. H. Miller, M.D.
Gladstone
Councilor 12th District



W. H. Huron, M.D.
Iron Mountain
Councilor 13th District



P. L. Ledwidge, M.D.
Detroit
Speaker, House of Delegates



E. R. Oakes, M.D.
Manistee
Vice Speaker, House of Delegates



O. D. Stryker, M.D.
Fremont
Councilor 11th District

COUNCILOR

Eldwin Roy Witwer, M.D., of Detroit was elected Councilor of the 16th District, succeeding Andrew S. Brunk, M.D., whose term automatically expired upon his election as President-Elect. Dr. Witwer graduated in medicine in 1914 and specialized in Roentgenology. He is a member of the American Roentgen Ray Society, and the American College of Radiology. He is secretary of the Wayne County Medical Society, of the Detroit Roentgen Ray and Radium Society, and president-elect of the Radiological Society of North America.

He has been active in County Society affairs and has served creditably as Delegate to the State Society. Wayne County will still be well represented.

OTHER ELECTIONS

P. L. Ledwidge, M.D., was re-elected Speaker of the House of Delegates. He has proved himself a resourceful and popular officer and deserves this recognition. He has been an inspiration and a challenge in carrying on his official duties. The Society is assured the benefit of his talent another year.

Ellery A. Oakes, M.D., of Manistee, was elected Vice Speaker of the House of Delegates. He graduated in 1925 and early assumed active participation in medical activities. He will make an able assistant to the Speaker.

A. H. Miller, M.D., Gladstone; Oscar D. Stryker, M.D., of Fremont, and W. H. Huron, M.D., of Iron Mountain, were re-elected as Councilors from their respective districts. They have been devoted officers faithfully attending to their duties as councilors and punctual in attending meetings. The Council and Society will profit much from their continued activity.

L. G. Christian, M.D., of Lansing, and Frank E. Reeder, M.D., of Flint, were re-elected Delegates to the American Medical Association. These gentlemen have served several years and have served our interests well.

Ralph H. Pino, M.D., of Detroit, and Howard H. Cummings of Ann Arbor were elected alternates. Dr. Pino has served in this capacity before.

Vernor M. Moore, M.D., of Grand Rapids is the new Chairman of the Council. His service on the Council and as Chairman of Finance has been a long and useful training. He will make a good chairman.

Ray S. Morrish, M.D., of Flint is the new Chairman of Publications. He has served several years on the Council and has a flair for medical writing.

E. F. Sladek, M.D., of Traverse City is retained as Chairman of the County Societies Committee. He has been active and his presence on the Executive Committee has been a great service of support and encouragement. He always attends meetings, frequently at great sacrifice of time and energy.

C. E. Umphrey, M.D., of Detroit is the new Chairman of Finance. We look forward to a successful year. There are decided problems to be met, growing out of the fewer number of paying members and greater expense.

Otto O. Beck, M.D., of Birmingham is retained as Vice Chairman of the Council. His services have been freely and graciously given.

GROWING PENICILLIN

A way to extend the benefits of penicillin to more civilians, by growing the mold in dressings for wounds, is suggested by Dr. George H. Robinson and Dr. Jas. E. Wallace, of Allegheny General Hospital in Pittsburgh. (*Science,* October 8.)

When penicillin, the potent germ-fighting remedy from mold, is given by injection into a vein, a concentrated and purified preparation must be used. Difficulties in large-scale production of this purified, concentrated penicillin limit its use, except in extreme cases, to the sick and wounded among our armed forces.

A crude, less concentrated product, however, can be used in treating wounds, sinus infections, boils, gonorrhea and other infections of the skin and mucous membranes, the Pittsburgh doctors believe.

Their method is to saturate gauze with a solution of yeast, sugar, starch and glycerin, to provide food for the penicillin-producing mold. This gauze is then sterilized and inoculated with the mold and used as dressing for infected wounds. The mold apparently grows and produces enough crude penicillin on the dressing to overcome the infection in certain cases.

One patient reported had had acute osteomyelitis and periostitus of the bone in his right upper arm for two weeks. Sulfa drugs had not given relief. Within three hours after the mold-inoculated gauze dressing was "planted" over the wound, there was less pain. In 10 days the patient was discharged from the hospital clinically well.

Another patient with a large furuncle on the back of his neck was treated with a similar dressing and by injection into the open crater of the furuncle of crude liquid penicillin prepared by the doctors. Within three days the patient was relieved of all discomfort and the wound was healing.

The method is now being used in treating three other patients, one with abscesses on the back and the others with osteomyelitis of the legs, and the patients are getting well.—*Science News Letter,* October 23, 1943.

S. 1161—THE SIGN AT THE CROSSROADS

ABOLISHING
Private Medical Practice
or
$3,048,000,000.00
of
Political Medicine Yearly in the United States

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- A factual analysis of the Medical and Hospitalization provisions of the Wagner-Murray Senate Bill 1161 and an explanation of some of their implications

FOREWORD

On June 3, 1943, Senator Robert F. Wagner, of New York—for himself and Senator James Murray of Montana—introduced in the Senate, Bill 1161.

If the recommendations are enacted into law, they will destroy the private practice of medicine in the United States.

The definition of purposes is couched in the language of the true humanitarian. (See page 598.) The principles enunciated as a guide to administration are sound and ethical. The actual motivations need not be discussed. The facts speak for themselves. The proposals are of such magnitude and of such sinister menace that, practically, they are incomprehensible to an American.

The processes proposed and the mechanisms indicated are designed to act as the catalyst in transforming a rapidly expanding Federal bureaucracy into an all-powerful totalitarian state control. Human rights as opposed to State slavery is the issue.

The accompanying treatise is confined to the medical and hospitalization provisions of the proposed legislation. The general implications are incomparably broader. Unless a tidal wave of protest forewarns the sponsors, this Bill or similar proposals will be enacted into law.

For too long, a semi-complacent medical profession, too proud really to protest, too overworked and overburdened with war responsibilites to give adequate consideration to basic problems, has contented itself with the sophistry "It can't happen here."

It is happening—now. Wartime fervor and preoccupation and wartime confusion are being used to obscure the true meaning of the moves. The issue is being forced. The settlement will be final. Doctors—informed—understanding—unified—can be the deciding factor in this final determination.

Herein an attempt is made to reduce to comprehensible terms the actual meaning of these incredible proposals. Appraise the facts—reach your own conclusions. Under conditions as they now exist, you have a moral and a legal right to them. Tomorrow? Tomorrow is another day.

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TOTALITARIAN MEDICINE IN THE UNITED STATES

Senate Bill 1161

Senate Bill 1161 makes provision for *free* general medical, special medical, laboratory and hospitalization benefits for more than one hundred ten million people in the United States.

It proposes placing in the hands of one man—the Surgeon General of the Public Health Service—the power and authority—

1. To hire doctors and establish rates of pay—possibly for all doctors.
2. To establish fee schedules for services;
3. To establish qualifications for specialists;
4. To determine the number of individuals for whom any physician may provide service;
5. To determine arbitrarily what hospitals or clinics may provide service for patients.

The provisions are so sweeping that, if enacted into law, the entire system of American medical care would be destroyed. Immediately

following are pertinent paragraphs of the Bill which create the machinery and provide the funds for these truly revolutionary procedures.

The Bill provides for the establishment of a "Unified Social Insurance System." It provides for tax payments from and insurance benefits for:

a. Practically every employed person in the United States;
b. Every self-employed person.

It is estimated that these provisions of the Bill would add approximately 25,000,000 persons to the 37,000,000 now carrying social security cards. The Bill provides that:

a. Sec. 960—Every employer shall pay a tax on wages paid to individuals (up to $3,000 per year) of 6%
b. Sec. 961—Every employe shall pay a tax, deducted from wages on earned income, up to $3,000 per year, of 6%
Total from payrolls..... 12%
c. Sec. 963—Every self-employed individual shall pay a tax on the market value of his services up to $3,000 per year, of 7%
d. Sec. 962—Federal, state and municipal employes (under certain conditions) shall pay a tax of 3½%

It has been estimated by the Treasury Department that, broadening the base of Social Security taxpayers and beneficiaries, as above outlined—with existing rates (total 5%) would raise $5,000,000,000.00 of revenue annually. On this basis the total annual revenue from Bill 1161 rates would be Twelve Billion Dollars ($12,000,000,000.00).

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The Decision Is Up to You—Right Now!

1.—You can demand a continuation of the practice of Medicine under the concept of The American Way with the assurance of the continuing progress in the science of Medicine and in the art of Medical practice; or

2.—You can refuse to be concerned about S. 1161, the Wagner-Murray Bill; thus failing to assume your part of the responsibility for the practice of Medicine in the future of the United States.

If you wish to act in this crisis this is what you can do:

1.—Obtain full knowledge and complete understanding of S. 1161 by writing immediately to the two United States Senators from California, Hiram W. Johnson, Washington, D. C., and Sheridan Downey, Atherton, California, asking them to send to you copies of S. 1161.

2.—After studying this proposed change in Medical practice in the United States lend your full coöperation in every effort to maintain the practice of Medicine according to the American way, if that is your decision; or work as actively for the establishment of a political system of Medicine if that be your decision.

You are simply urged to become fully aware of this powerful movement for tremendous change and to act vigorously in accordance with your decision.

The decision is up to you; your action is a responsibility that you owe the people of the country and the profession of which you are a part.

The Bill provides: (Section 969) the establishment of a trust fund to be known as "Federal Social Insurance Trust Fund." Into this fund all Social Security taxes would be paid —$12,000,000,000 annually.

The Bill provides: (Section 913)

a. There is hereby established within the Trust Fund a separate account to be known as "The Medical Care and Hospitalization Account";
b. The managing Trustee shall credit to this account—
   1. One-fourth of the contributions paid, in accordance with sections 960 and 961 respectively, of this Act.
   2. Three-sevenths of the contributions paid, in accordance with Sections 963, 964 and 965 respectively, of this Act.

In such manner, on the basis of the above estimates, a minimum of Three Billion Dollars ($3,000,000,000) each year would be transferred from the Trust Fund to the Medical Care and Hospitalization Account.

The Bill provides: (Section 901) that (a) every insured individual and (b) every dependent entitled to benefits shall be entitled to receive general medical, special medical, laboratory and hospitalization benefits. Initially 30 days of hospitalization is provided. If funds are available this can be increased to 90 days each year.

ADMINISTRATION

The Bill provides (Section 903):

a. The **Surgeon General of the Public Health Service** is hereby authorized and directed to take all necessary and practical steps to arrange for the availability of the benefits provided under this title.

b. In carrying out the duties imposed upon him by subsection (a) of this section, the **Surgeon General** is hereby authorized to negotiate and periodically to renegotiate agreements or coöperative working arrangements with **appropriate agencies of the United States, or of any state or political subdivisions thereof, and with other appropriate public agencies, and with private persons or groups of persons, to utilize their services and facilities and to pay fair, reasonable, and equitable compensation for such services or facilities,** and for the Trust Fund to receive reimbursements for services rendered with respect to individuals in circumstances under which benefits are not authorized under this title, and to negotiate and periodically to renegotiate agreements or coöperative working arrangements for the purchase or availability of supplies and commodities necessary for the benefits provided under this title; and, after approval by the Social Security Board, to enter contracts for such services, facilities, supplies and commodities.

c. The **Surgeon General** shall periodically notify the Board of obligations incurred under contracts entered into by him in accordance with the provisions of this section and to whom such obligations obtain. Thereupon, the Board shall authorize and certify disbursements from the Trust Fund to meet such obligations, and such certified disbursements shall be paid from the Trust Fund.

The Bill provides: (Section 904)—There is hereby established a National Advisory Medical and Hospital Council, to consist of **the Surgeon General** and sixteen members to be appointed by **the Surgeon General.**

This council has no authority. The **Surgeon General** selects and appoints the members. It can advise. All authority and power are vested in the **Surgeon General.**

The Bill provides (Section 905):

1. Any physician qualified by a State can furnish medical service in accordance with such rules and regulations as may be prescribed **(by the Surgeon General).**
2. Every individual shall be permitted to select his own doctor or to change such selection in accordance with such rules and regulations as may be prescribed **(by the Surgeon General).**
3. **The Surgeon General** shall publish the names of general practitioners who have agreed to furnish service.
4. Services which shall be deemed to be specialist services shall be those so designated by the **Surgeon General.**
5. General practitioners must recommend services of specialists.
7. Payments to physicians may be made—
   a. According to a fee schedule approved by the **Surgeon General;**
   b. On a per capita basis—the amount being according to the number of individuals on physicians lists;
   c. On a salary basis, whole or part time;
   d. A combination or modification of these bases, as approved by the **Surgeon General.**
8. Specialists may be paid on the basis of salary (whole or part time) per session, fee for service, per capita or other basis or combinations.
10. **The Surgeon General** may prescribe maximum number of individuals for whom any physician can provide service.
11. **The Surgeon General** may distribute the available patients among the available doctors on a pro rata basis.
12. In each area the provision of general medical benefits for all individuals entitled to such benefits shall be a collective responsibility of all qualified general practitioners in the area who have undertaken to receive such benefit.

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HOSPITALS

The Bill provides (Section 907):

a. **The Surgeon General** shall publish a list of institutions found by him to be participating hospitals.

(The term "participating hospital" means an institution found by the **Surgeon General** to afford professional service, personnel, and equipment adequate to promote the health and safety of individuals customarily hospitalized in such institutions and to have procedures for the making of such reports and certificates as the **Surgeon General** and the Social Security Board may from time to time require.

(The term "hospitalization benefit" means an amount, as determined by the **Surgeon General** after consultation with the Council and after approval by the

Social Security Board; Not less than $3 and not more than $6 for each day of hospitalization; not in excess of thirty days, which an individual has had in a period of hospitalization; and not less than $1.50 and not more than $4 for each day of hospitalization in excess of thirty in a period of hospitalization; and not less than $1.50 and not more than $3 for each day of care in an institution for the care of the chronic sick.

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SUMMATION

This is the method—clause by clause—by which sole responsibility for the medical care and hospitalization of more than 110,000,000 people is placed on one man, **the Surgeon General of the Public Health Service.**

In such manner—step by step—section by section—is created the machinery to place in the hands of one man, the **Surgeon General of the Public Health Service,** the expenditure of $3,000,000,000 annually.

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FINANCIAL ASPECTS

How much is Three Billion Dollars? What can be done with it? What can be accomplished? The potential can be understood only by comparisons.

For the ten-year period from 1924 to 1933, both years inclusive, the total revenue of the Government of the United States, from all sources, was $35,412,944,412—or an annual average of $3,541,294,441.

The Bill, if enacted into law, would provide general medical and special medical care, laboratory tests and hospitalization for approximately one hundred ten million people. **The Surgeon General of the Public Health Service** is authorized and instructed to make such services available.

It is estimated that, at the present time, there are in the United States, available for civilian practice, 120,000 effective physicians. With three billion dollars the **Surgeon General could—**

a. Allocate 20% for administration costs	$ 600,000,000.00
b. Hire every effective physician in the United States at an average salary of $5,000 a year ..	600,000,000.00
c. Buy every available bed in every non-government owned hospital (368,046) 365 days each year (134,336,790 hospital bed-days) at $5.00 per day..	671,683,950.00
d. Pay $2.50 per day for each and every government owned hospital bed (1,051,781) 365 days in the year (383,900,065 hospital bed-days)	959,750,162.50
e. Spend for drugs and medicines	168,565,887.50
	$3,000,000,000.00

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MEDICAL EDUCATION

In addition to the above

The Bill provides (Section 1111):

"For the purpose of encouraging and aiding the advancement and dissemination of knowledge and skill in providing benefits under this Act and in preventing illness, disability, and premature death, **the Surgeon General** is hereby authorized and directed to administer grants-in-aid to nonprofit institutions and agencies engaging in research or in undergraduate or postgraduate professional education.

"For the purposes of this subsection there shall be available, for each calendar year beginning with the calendar year 1944, an **amount equal to 1 per centum of the total amount expended for benefits from the Trust Fund, exclusive of unemployment insurance benefits, or 2 per centum of the amount expended for benefits under Title IX** after benefits under that title have been payable for not less than twelve months, whichever is the lesser, in the last preceding fiscal year.

"Such grants-in-aid, in such amounts and for payment at such times as are approved by **the Surgeon General,** shall be certified for payment by the Social Security Board to the Managing Trustee who shall pay them from the Trust Fund to the designated institutions or agencies."

Assuming that out of the $3,000,000,000—$600,000,000 is spent for administration and $2,400,000,000 is paid out in benefits—and that this measure is taken—the **Surgeon General** would have 2% of this sum or $48,000,000 each year to spend for medical education and medical research.

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WHAT COULD BE DONE?

With the amount available, the **Surgeon General** could—

a. Assume the total costs of operating the 66 accredited medical colleges in the United States	$21,491,248

b. Subsidize 22,000 medical students to the extent of $700 per year for a period of four years	15,400,000
c. Spend for other research each year	11,108,752
	$48,000,000

OR

a. Duplicate all existing medical teaching facilities	$22,000,000
b. Pay 20,000 additional medical students $700 per year during the period of training	14,000,000
c. Otherwise spend	12,000,000
	$48,000,000

SENATE BILL NO. 1161

Frank D. McKay, in a front-page editorial in the *Michigan Times,* October 8, 1943, says in black face type:

"If this bill becomes law—which every American who still cherishes his right of self-determination hopes it never will—the United States will take a major step away from its traditional moorings as a free country, and embark actively upon a totalitarian régime having its ground work in national Socialism.

"So drastic and revolutionary is this bill that it will take from the average American citizen his right of authority over himself as to treatment of his life and health. This right the Wagner-Murray bill would place entirely in the hands of government.

"In other words, sickness is to be practically free with everything guaranteed except the patient's recovery. The latter is the only factual benefit not guaranteed by the bill. This service is to be extended to all who come under the benefits of the Social Security law.

"It is the entering wedge for further and greater departures along the road to totalitarian rule. With political appointees at the head of the nation's health, it will not be long before a Hitler will prescribe the nation's liberties.

"When and if the Wagner-Murray bill becomes law, the individual's freedom will have passed into the limbo of forgotten and abandoned blessings. When you can no longer decide what to do with and for your own body, you are no longer free. You will then have taken a step in the wake of the German procession which was lured on by glittering and fanciful totalitarian promises, only to be destroyed by the one-man rule."

* * *

Mark Foote, from a Washington headline, has had a short series of articles dealing with the Wagner-Murray bill, appearing in several of our daily papers in Michigan, giving to the general public much of the same information we have been giving our members through THE JOURNAL. These articles are worth reading by our members and their friends. Mark Foote says:

"The implications of the proposal, however, are far wider than their immediate effect on the medical profession. They touch the already heavily burdened taxpayer, and are part and parcel of a pattern of socialization of finances, banking, insurance, housing, and even extended to federal ownership of land and other real estate, and many other phases of ordinary life.

"The scheme is a natural sequence of events which constitutes a sort of creeping paralysis set in motion during the last ten years by a certain school of theorists and economists whose thinly veiled purpose is to throttle private initiative and the profit system and substitute totalitarian techniques.

"Always these theorists begin with what they term modest proposals.

"Take the provisions of the bill with respect to medical care and hospitalization. They most certainly are the beginning of a system of totalitarian medicine in this country. They set up the surgeon general of the U. S. public health service as the boss or "czar" of medical care and hospitalization. He is given three billion dollars to implement the scheme.

"The surgeon general and the social security board jointly shall have the duty of spending and making recommendations as to the most effective methods of providing dental, nursing and other needed benefits not already provided under this title, and as to expected costs for such needed benefits." Does anyone doubt what they would recommend?"

SHALL WE CHANGE OUR FLAG?

State medicine—political control of medical service—always has meant, always will mean, for the mass of people, medical care through and by physicians who are politically amenable rather than by those with superior abilities and skills. That is the opinion of the medical profession and others who oppose the proposal now pending in Congress to socialize medicine under the label of humanitarianism.

The proposal is officially listed as Senate Bill No. 1161. On the surface, it merely provides for the extension of social security legislation. In reality, it is a selfish, ruthless scheme to destroy the liberties of every doctor in the nation. Its implications are terrifying to thoughtful citizens who see in it a precedent that can be used to impose virtual serfdom upon any group whose services may next be demanded, for the avowed purpose of furthering the "general welfare."

If the medical profession can be seized lock, stock, and barrel by government, what about the industries that clothe, house, feed and transport us? All of them are vital. Even the amusement industry is considered essential to the war effort. Why not write a law, seize the works and call it by its right name—communism?

If we want immediate comfort and security badly enough to abandon the basic principles of individual freedom that have made this nation what it is, we should quit pretending to be fighting for democracy and freedom. We are not. We are fighting to be merely comfortable. Instead of the stars and stripes, our standard should be a feather bed emblazoned with a plate of food. —*Industrial News Review,* quoted in J. Florida M.A., October, 1943.

PIERROT TO DEVELOP NEW MEDICAL CENTER

George Pierrot has been appointed executive secretary of the Finance Committee for the proposed Medical Science Center of Wayne University.

Pierrot, prominent for many years in the fields of

journalism and public relations, has been director of the United Service Organizations in metropolitan Detroit for the past seventeen months. For twelve years he edited the *American Boy,* the *Youth's Companion,* and more recently acted as president and director of the World Adventure Lecture Series.

Questioned concerning the proposed Medical Center, Pierrot pointed out that a real need exists in the city for such an establishment and added that Detroit is the only major city in the United States which does not possess an adequate medical educational institution. "If this project is carried out as planned," he said, "it will make Detroit outstanding in the field of medical education—especially in the field of industrial medicine."

STANDING ORDERS FOR NURSES IN INDUSTRY

The Committee on Industrial Health of the Michigan State Medical Society has called attention to a pamphlet prepared by the Council on Industrial Health of the American Medical Association. This is a reprint of an article in the *Journal of the American Medical Association,* August 28, 1943, pp. 1247-1249. These are valuable standing orders to implement care pending the arrival of a physician, and should be modified by any industry using them to meet their individual needs. This, however, is a wonderful start.

HEADS MEDICAL WOMEN'S ASSOCIATION

Dr. Frances MacCraken, instructor in ophthalmology at the Wayne University College of Medicine, was elected president of the Michigan branch of the American Medical Women's Association at that organization's convention held in Detroit last week.

Dr. MacCraken, who was graduated from the College of Medicine in 1921, was the first woman to receive an M.D. degree from the College after it was taken over by the Board of Education.

MEMBERSHIP CARDS, IN 1944

The Michigan State Medical Society is eliminating membership certificates, as a wartime measure, to save vital paper and especially the scarce pulpwood used in the pasteboard protectors in which the certificates are mailed.

The membership card will be continued. It will contain the phraseology of the certificate. Its small size will mean a material saving in scarce paper stock, printing expense, and postage—approximately $250.00.

The coöperation of the membership is requested in this necessary wartime measure.

LIQUOR RATIONING IN SICKNESS

Michigan Doctors of Medicine are being called upon to write prescriptions for whisky, brandy, or other liquors for certain patients whose conditions require the consumption of certain amounts of liquor per day, in most cases more than the amount permitted by the rationing rules of the Michigan Liquor Control Commission.

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The Commission, on September 10, 1943, decided on the following *temporary* arrangement:

That a Doctor of Medicine may write a prescription certifying that the patient (mentioning his or her name) is to have X amount of liquor without regard to previous purchases made by the patient on his or her ration card. The prescription is to be signed by the physician.

The patient can then take the prescription to the State Liquor Store or the S. D. D. where it will be honored.

OSTEOPATHY IN CALIFORNIA

General discussion took place concerning the proposals that had been communicated to members of the Council by some osteopathic physicians and surgeons.

It was agreed that a committee, consisting of Doctors Cline and Dewey, and Mr. Pert, be appointed to draft a resolution in which would be incorporated matters upon which the Council had come to agreement. The following resolution was submitted and adopted:

WHEREAS, The Council of the California Medical Association has been informed that representatives of the California State Osteopathic Association have conferred with representatives of the California Medical Association concerning plans whereby osteopathic physicians and surgeons might secure additional training leading to the degree of M.D.; and

WHEREAS, the representatives of the California State Osteopathic Association in conference have expressed their intention to:

(a) Repeal the existing osteopathic initiative;

(b) Terminate the existence of the College of Osteopathy in Los Angeles, as a college of osteopathy, and make its facilities available to an acceptable university for medical teaching; and

(c) Conclude arrangements with a university to offer a special curriculum to which an osteopathic physician and surgeon, or a student or intern at the time of consummation of such plans, may be admitted; such person to receive the degree of M.D. upon satisfactory completion of the course; and

WHEREAS, it appears to the Council of the California Medical Association that it would be in the public interest to include the osteopathic physicians and surgeons of California with the Doctors of Medicine of California; therefore, be it

RESOLVED, that the Council of the California Medical Association approves of the foregoing plan to facilitate the merging of the osteopathic physicians and surgeons with the doctors of medicine of California; and be it

RESOLVED, that the Council of the California Medical Association, upon fulfillment by the California State Osteopatic Association of the intentions herein outlined, will recommend that its component county societies open membership in the usual manner, to those osteopathic physicians and surgeons who have achieved the degree of M.D. under this program, and associate membership to the osteopathic physicians and surgeons who have licenses in good standing; and be it further

RESOLVED, that the Council of the California Medical Association will undertake to obtain approval of this program by the Council on Medical Education of the American Medical Association and the Association of American Medical Colleges.

—Minutes of the Council, California State Medical Society, August 22, 1943.



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MICHIGAN'S DEPARTMENT OF HEALTH

H. ALLEN MOYER, M.D., Commissioner, Lansing, Michigan

GAINS IN POPULATION BOOST BIRTHS, DEATHS

Births in Michigan this year are expected to exceed 123,000 on the basis of the 61,628 total for the six-month period ending with June but may not reach the all-time high of 124,069 reported for 1942 by the Michigan Department of Health. The 1942 record total was a gain of 16,571 over 1941. Increase in births, this year and last, are in step with population gains.

Deaths in the state this year may exceed last year's total by nearly 6,000 as compared with a normal annual increase of less than a thousand. If deaths exceed 58,000, as is indicated, a new all-time high will be established. Deaths in 1942 totaled 52,737.

CASE FINDING PROGRAM IS BIGGEST IN HISTORY

The biggest venereal disease case finding program in Michigan's history is part of the state health department's wartime control effort. Private and public health physicians, Selective Service and industrial examiners have secured more than 800,000 blood tests since January 1 and the total for the year will probably exceed 1,500,000. In 1935, only two million blood tests were made in the entire United States.

COLLECTION OF BLOOD FOR PLASMA IS BEGUN

Collection of donor blood from which plasma is processed in the state health department's Lansing laboratories is being carried on in Michigan cities by a traveling clinic, the legislature having made $20,000 available July 1 for purchase of equipment and operating expenses for one year.

Local Red Cross chapters are in charge of arrangements in cities visited by the clinic, supplying quarters and additional nurse personnel, and are operating canteen service.

Civilian defense requirements have priority for the duration of the war on all stocks of processed plasma. The department laboratories, where principal reserves will be held, also will set aside a supply sufficient to meet any conceivable need arising from a nonmilitary catastrophe.

Communities where blood is furnished by donors will set up their own blood plasma reserves, usually in hospitals, from which local physicians may obtain free plasma for treatment of patients in their charge. An accounting will be kept of blood furnished in participating communities and local reserves will be determined and maintained on such basis.

Nonparticipating communities will be furnished plasma as needed if reserve supplies are adequate and if such communities are ready to supply blood on call.

BIG MALARIA THREAT IN KALAMAZOO VALLEY

Adequate mosquito control measures should prevent any future malaria outbreak in Michigan from reaching epidemic proportions, the state health department announces in reporting results of a survey of mosquito breeding places in southern counties. Most serious malaria threat in Michigan in the future will center in the Kalamazoo valley, according to the report.

Return to Michigan of malaria-infected service men has centered attention of public health authorities on the problem of mosquito distribution and control. An entomologist engaged by the department, working below the Muskegon-Bay City line, reports greatest concentrations of malaria-carrying mosquitoes and most likely breeding places are found in the Kalamazoo valley. The survey will be extended into northern counties of the southern peninsula and into the northern peninsula next season.

No real malaria threat is found around Detroit, and it is believed to be least serious north of the Muskegon-Bay City line.

The United States Public Health Service has demonstrated mosquito control measures in the Battle Creek area in recent weeks and is expected to continue such activity next summer. It is unlikely that the state health department will ask the legislature for money to fight mosquitoes.

RESORT SEASON OF 1943 HEALTHIEST OF RECORD

Michigan's 1943 resort season has been the healthiest of record according to the state health department. There has been no report of illness traceable to contaminated water, milk or food. Rigid inspections of water, milk and food supplies are routine in resort areas in normal times and have contributed to Michigan's excellent reputation as a healthy vacation state. Inspectors' work in previous years paid dividends this summer when lack of trained personnel forced some curtailment of inspection services. Inspections have been continued in areas served by full-time health departments.

FEWER MARRIAGES

Fewer marriages may be recorded in Michigan this year than in any like period since 1939, according to state health department figures. June marriages, this year, fell below five thousand for the first time since 1938, the total having been 4,910.

All-time high in Michigan marriages was registered last year, a total of 51,585. On the basis of six-month figures, this year, the 1943 total will drop below 40,000. In the first six months, this year, 19,881 marriages were recorded.

Decline in marriages this year is believed to reflect the steady transfer to military services of men from civil life.

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Woman's Auxiliary

The Seventeenth Annual Meeting of the Woman's Auxiliary to the Michigan State Medical Society was held in Detroit, September 20-22, 1943, at the Statler Hotel.



Mrs. J. J. Walch,
President
1943-44

Registration opened on Tuesday at 10:00 under the capable chairmanship of Mrs. Ledru Geib, who reported sixty-three delegates registered and forty-three guests. Mrs. Milton A. Darling, Mrs. Frederick G. Buesser, and the Hospitality Committee, welcomed members and guests.

Mrs. Elmer Whitney entertained the Past Presidents and Secretaries club at a very lovely dinner and evening of entertainment, Monday night, at her home on Shrewsburg Road. Sixteen members attended and Mrs. Guy L. Keifer was reëlected president of the club.

Forty-two County Presidents and Committee Chairmen attended the Pre-convention Board Meeting and luncheon held in the Salle-Detroit Room of the Statler Hotel. The National President, Mrs. Eben J. Carey, was present and spoke informally.

The Wayne County Auxiliary were hostesses at a Tea honoring the National President, held at the Wayne County Medical Building. Mrs. William L. Sherman and Mrs. William A. Irwin were co-chairmen of the very lovely Tea.

Mrs. John J. Walch and Mrs. Roger V. Walker entertained in honor of the State President, Mrs. Gordon Willoughby, at the latter's home on Iroquois Avenue, which was also well attended and most enjoyable.

The Annual Banquet was held Tuesday evening in the Michigan Room, which was beautifully arranged with red glads and flags of the Allied Nations. After the singing of the National Anthem, Mrs. Willoughby introduced the Past Presidents and Guests. H. H. Cummings, M.D., President of the MSMS, addressed the gathering, stressing the need of unity in this time of distress. F. E. Reeder, M.D., chairman of the Advisory Council, also gave an inspiring talk on the work to be done by the members and the need of every doctor's wife acquainting herself with the legislative bills pending and be able to speak intelligently with lay groups regarding these bills.

Mrs. Eben J. Carey, the National President, spoke of the development and growth of the organization of the Auxiliary and explained the Nurses Cadet Corps project which National endorses as a project for immediate work. After dinner a bridge party was enjoyed in the English Room. The very capable chairman of the evening was Mrs. Leo Bartemeir.

The Convention was formally opened Wednesday at 9:00 o'clock in the English Room by Mrs. Gordon L. Willoughby, State President. The Pledge of Allegiance was conducted by Mrs. G. M. Brown of Bay City. Wyman D. Barrett, M.D., President of Wayne County Medical Society, welcomed the auxiliary to Detroit on behalf of the Medical Society. Mrs. T. Grover Amos, President of Wayne County Auxiliary, also welcomed the members. Mrs. H. L. French, in behalf of the Auxiliary, gave the response.

The "In Memoriam" service was given by Mrs. Alvin Thompson, of Genesee County.

Mrs. Willoughby in her president's message praised the counties for carrying on their activities and keeping their membership active, for participating in every phase of war service work, stressing the continuance of all worth-while projects and plans for the future.

Twenty-two County Presidents gave reports of active and inspiring work in Medical and Civic projects. Some told of difficulties developing from the fact so many members had left to accompany their husbands serving in the armed forces and their determined effort to surmount them.

Officers were elected as follows:

Mrs. John J. Walch, President.
Mrs. H. L. French, President-elect.
Mrs. L. C. Harvie, Vice President.
Mrs. R. H. Alter, Treasurer.
Mrs. Otto Hult, Secretary.
Mrs. R. H. Frasier, Director of Student Loan Fund.
Mrs. Guy L. Keifer conducted the installation.

Mrs. John J. Walch gave her inaugural address, urging the continuance of War Service Projects, Registration of Nurses, Study of Child Delinquency, and the need of our Auxiliary taking as a new project the Nurses Cadet Recruiting which is so vitally needed at this time, and keeping informed on all Medical Legislation.

The efficiency with which the meeting was carried on was greatly aided by Mrs. Norman O. LaMarche and her very helpful pages. The meeting was adjourned at eleven-thirty.

At 12:30 o'clock the Annual Luncheon was held in the Palm Room of the Book-Cadillac Hotel, Mrs. A. O. Brown presiding with Mrs. John M. Carter, as chairman. The National Anthem was led by Mrs. H. K. Snider, accompanied by Mrs. Roland Athay. Mrs. Willoughby presented a Medical Kit to Lt. Wm. E. Tracy for use in the Submarine Chaser P. C. 1139. The kit was presented in behalf of the

Medical and Surgical Relief Committee of America. Lt. Tracy thanked the Auxiliary, for the crew. The meeting was then turned over to Mrs. Galen Ohmart, State Program Chairman, who introduced Miss Emily Sargent, Chairman of the Michigan Nursing Council for War Service, who spoke on Nurses' Recruiting, urging that every member learn the needs and resources of the Nursing Council and interpret them to physician and friends. Miss Grace Ross also spoke on Nurses' Education.

The Post-Convention Board Meeting was held in the Palm Room after the luncheon. Mrs. John J. Walch, the new president, presided. State Chairmen and County Presidents for 1943-44 discussed the work for the coming year.

A very interesting exhibit showing the results of the Tuberculosis Radio Contest, together with the Press Books for the year, were on display in the Salle Room, Tuesday.

Appreciation is expressed to the President and members of the Michigan State Medical Society for inviting Auxiliary members to "Presidents' Night" which was an inspiring occasion.

Members are deeply indebted to the Auxiliary President, the Convention Chairman, assisted by her very efficient committee, for this successful convention, from which they have derived much benefit and greater interest in going ahead with the very important Auxiliary work.

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* * *

The Military Roster of MSMS members in the Army, Navy and Marines will be published in the January, 1944, number of the MSMS JOURNAL.

* * *

The Proceedings of the MSMS House of Delegates, Session of September 20-21, 1943, will be published in the December number of the MSMS JOURNAL.

* * *

Carey P. McCord, M.D., and J. D. Goodell, Detroit, are authors of a special article entitled "The Abatement of Noise," which appeared in the JAMA of October 23.

* * *

Ciba Pharmaceutical Products have placed the equivalent of five pages of advertising in this number of the MSMS JOURNAL. Ciba also placed a similar amount of advertising in the October, 1943, JOURNAL.

* * *

M. K. Newman, M.D., Detroit, is the author of an original article entitled "Present Status of Therapeutic Hypothermia" which appeared in the *Archives of Physical Therapy,* July, 1943.

* * *

Auto anti-freeze. As of October 1, 1943, all restrictions on the sale of permanent type anti-freeze were lifted by the War Production Board. There are no WPB restrictions as to its purchase, if available in your vicinity.

* * *

John W. Hirshfield, M.D., Matthew A. Pilling, M.D., and Mark E. Maun, M.D., Detroit, are the authors of an original article entitled "The Use of Bio-Dyne Ointment for Burns," which appeared in JAMA of October 23.

* * *

Found at the 1943 War Conference: ONE BLACK LEATHER NOTE BOOK containing various notes of a medical nature, but with no identification. Owner may obtain same by writing the Executive Office, 2020 Olds Tower, Lansing 8, Michigan.

* * *

Claude R. Keyport, M.D., Grayling, President of the MSMS, J. Earl McIntyre, M.D., Lansing, Secretary of the State Board of Registration in Medicine; Francis J. O'Donnell, M.D., Alpena; R. R. Goldstone, M.D., Detroit, and D. C. Eisele, M.D., Ironwood, have been appointed by Governor Harry F. Kelly to the Michigan State Board of Registration in Medicine, effective October 26, 1943. Congratulations!

* * *

Income taxes: If you contemplate any financial transactions—buying or selling—it is recommended that you do it before December 15, 1943 (instead of before December 31, 1943) so as not to be penalized by any under-estimating of your tax. The last fifteen days of December might throw your tax estimates out of balance—beyond the 20 per cent differential allowed—and thus cause you to be penalized.

* * *

Certificate of Medical Need Required

In all cases hospitalized under the Michigan Crippled Children Commission, a physician's certificate showing medical or surgical need is required. Physicians with their knowledge of the costs of medical care and the family circumstances are in an excellent position to judge whether or not the family is able to provide treatment from its own resources. For those unable to provide this treatment the physician should fill out the physician's certificate so that the child may receive care under the Michigan Crippled Children Commission.

In effect, it is left to the discretion of the physician to decide what type of medical service the child should receive.



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IN MEMORIAM

Ross U. Adams of Kalamazoo was born June 2, 1883, in Marcellus and was graduated from the Detroit College of Medicine in 1907. He began the practice of medicine in Kalamazoo. During World War I he served as a captain in Base Hospital No. 36. After the War, Doctor Adams resumed his practice in Kalamazoo, where he remained until the time of his death, September 30, 1943.

William H. Barnum of Fremont was born February 3, 1873, in Newaygo County near Bailey, and was graduated from the Saginaw Valley Medical School in 1902. That year he came to Newaygo, where he practiced until he retired ten years ago. He served as secretary of the Newaygo County Medical Society for thirty-five years, was past president of the Fremont Chamber of Commerce and was active in many civic organizations. Doctor Barnum died suddenly on September 4, 1943.

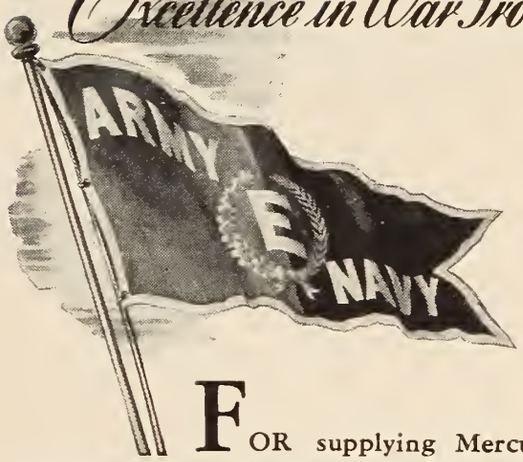
Gabriel D. Bos of Holland was born January 31, 1888, at Noordeloos and was graduated from the Detroit College of Medicine in 1887. He practiced a year in Detroit before going to Fennville in 1921, where he continued his practice five years. In 1928 he located in Holland, Michigan, and practiced until the time of his death August 14, 1943.

George C. Chene of Detroit was born in Detroit in 1882 and was graduated from the Detroit College of Medicine and Surgery in 1905. After his internship at St. Mary's Hospital he specialized in roentgenology, and thereafter limited his practice to radiology. He established the first x-ray laboratories in St. Mary's and Providence hospitals, Detroit, and at the Hotel Dieu in Windsor, Ontario. For many years he was a faculty member of the Detroit College of Medicine and Surgery and a staff member of St. Mary's, Receiving, Eloise and Providence hospitals, either as attending or consulting radiologist. Doctor Chene died after a long illness, August 31, 1943.

L. E. Cochran of Peck was born in 1867 and was graduated from Western Reserve University School of Medicine in 1891. Five months after his graduation, he located in Peck where he contributed fifty-one years of continuous service to that community. For many years he served on the school board and as Elk township health officer. Doctor Cochran died September 2, 1943.

Gaylord H. Healy of Bay City was born in Minden City on January 29, 1877, and was graduated from the Detroit College of Medicine in 1897. Doctor Healy practiced with his father in Minden City several years before locating in Detroit where he

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remained ten years. He then joined the staff of Jones Clinic of Bay City, with whom he had been associated for fourteen years. Doctor Healy died September 23, 1943.

Anton F. Ottrock of Detroit was born December 3, 1906, in Otrok, Jugoslavia. He was graduated from Wayne University College of Medicine in 1932. For one year after graduation he interned at St. Joseph's Mercy Hospital, Detroit. He was an active member of the staff of St. Joseph's Mercy Hospital and St. Francis Hospital, Hamtramck. Doctor Ottrock and his wife were killed in an automobile accident September 11, 1943.

John Randolph Rogers of Grand Rapids was born October 19, 1868, in Rome, Italy, and was graduated from the University of Michigan Medical School in 1895. Doctor Rogers was a charter member of the Association for the Blind and for twenty-nine years had been its president. He was a past president of the Kent County Medical Society, head of the Department of Eye, Nose and Throat of Butterworth Hospital for many years and a fellow of the American College of Surgeons. He died September 10, 1943.

Charles Forest Whiteshield of Trout Creek was born in 1863 at Sioux Falls, S. D., and was graduated from the Michigan College of Medicine and Surgery in 1906, having graduated in Dentistry from the same College in 1901. During the World War I, he served as first lieutenant in the medical corps of the Michigan State troops. He served as president of the Powers-Spalding war preparedness board and also a board of health officer in Powers from 1916 to 1922. Since 1939 he had been public health officer of Trout Creek, where he was physician and surgeon for the Weidman Lumber Company. Doctor Whiteshield died September 26, 1943.

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PRESENT DAY CONCEPTS OF THE USE OF DIGITALIS

(Continued from Page 902)

preparations when intravenous therapy is decided upon. For this reason many cardiologists have used crystalline stropanthus when intravenous digitalization was needed. Now, however, both cedilanid and digitaline nativelle, as well as other preparations, are available and one may attain the same accuracy and constancy of potency as with crystalline stropanthus. Cedilanid is given in a dose of 8.0 c.c. intravenously in either a single injection, or, in the presence of an active myocardial process, in two doses of 4.0 c.c. separated by an interval of two or three hours. Each cubic centimeter contains 0.2 mg. of cedilanid. In unusual instances more than 8.0 c.c. is required for full digitalization, and an additional 2 or 4 c.c. must be given. After the full dose has been given, an interval of twenty-four to forty-eight hours should be allowed before starting the maintenance dosage. This is usually given by mouth and averages from two to four tablets daily. The intravenous maintenance dose is from one to three cubic centimeters daily. When digitaline nativelle is given intravenously, the dosage is 0.42 mg. every one to two hours for three doses. Since speed of action and dosage of this drug are practically the same by either the oral or intravenous route, there is no apparent advantage in using it intravenously unless the patient cannot take it by mouth. The maintenance dose of this preparation is from 0.1-0.2 mg. daily.

Although the crystalline preparations are measured by weight and their dosage established by clinical trial, their potency is sometimes stated in terms of cat units. This is as misleading as it is unnecessary. There is no relation between the clinical potency of these preparations and the number of cat units which they contain. The rules which we have all learned in regard to the required number of cat units of the usual preparations of Digitalis purpurea do not apply. This is very apparent when one considers that three cat units of digitaline nativelle, given either orally or intravenously, 5.7 cat units of cedilanid given intravenously, and 20 cat units of digilanid given orally are all full digitalizing doses. Therefore, one must disregard cat units and use dosages expressed in numbers of tablets, cubic centimeters, or milligrams.

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THE DOCTOR'S LIBRARY

Acknowledgment of all books received will be made in this column and this will be deemed by us as a full compensation of those sending them. A selection will be made for review, as expedient.

KAISER WAKES THE DOCTORS. By Paul DeKruif, New York: Harcourt, Brace and Company, 1943. Price $2.00.

Paul DeKruif in his inimitable manner has again given the world and the medical profession something to think about. He has dramatically pictured the plan for medical services developed in the Kaiser shipyards. That statement is not entirely true, because Dr. Sidney Garfield really started this thing going on his own, while taking care of the men in the desert, building the Los Angeles Aqueduct. DeKruif stresses the great break from medical tradition in establishing a "Little Mayo Clinic" for these people, but in that very breath gives a wrong impression. He paints a picture at some length of the danger of these doctors who were to work for the Kaiser plan having to give up their standing with the medical societies. That is not true, as witness the members and doctor employes of the Mayo Clinic to which he refers, and many other clinics, notably the Crile Clinic, the Lahey Clinic, the Battle Creek Sanitarium, to come closer home. The heads of all of these mentioned, except the Sanitarium, have been presidents of the American Medical Association.

The picture is painted of prepayment medical care as being new and revolutionary. The Michigan State Medical Society spent twenty thousand dollars on a four-year study, and brought in a report upon which just such a plan was proposed and could be set up in Michigan. That was in 1933. The plan was finally abandoned, not because it was so foreign to the ideals of the medical profession, but purely on the basis of the insurance laws that would apply.

DeKruif does not mention the Michigan Medical Service plan which does very much of the service he so glowingly describes. His plan cares for the employed worker for hospitalized care at seven cents a day. It has been demonstrated in Michigan that that can be done, and that the price is probably adequate to pay the doctors on the traditional fee basis. Kaiser's advantage is that his doctors are on salary, but he has offered them salaries from $450 to $1,000 per month, which is adequate to get good doctors, corresponding to a private practice that will gross from $10,000 up.

The Kaiser plan cares only for the workers. They are clamoring for coverage of their families, but that has not yet been provided. Why? "It takes time to set that up." But the plan for the workers was set up and is working. The reason is that the families are altogether a different thing, and will not come

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under the seven cents a day. And that seven cents a day is only a catch word, for it is actually fifty cents a week, plus the workman's compensation, an item not to be ignored. In fact, that is probably the item that made the difference between a great success and a failure. Dr. Garfield himself found that out.

The book is entertaining, full of challenging thoughts and should be read by every doctor. It will make you think. There is much to intrigue a man, and much hope for the future of prepayment medicine. Something of that order is in the immediate future, and it should be operated under medical direction. In Michigan we have proven that a plan for prepayment medical care can work. It is working on a greater coverage in numbers and services than the Kaiser plan, and ours has not met the complete support of our members. Medical men are ultraconservative but will follow when the truth has finally been demonstrated. This book will have its influence in the new awakening, for it has presented to the general public a hope that will be demanding, and one which the profession must supply voluntarily or by compulsion.

NERVOUSNESS, INDIGESTION, AND PAIN. By Walter C. Alvarez, M.D., Professor of Medicine, University of Minnesota (Mayo Foundation); Consultant in the Division of Medicine, The Mayo Clinic, Rochester, Minnesota. New York and London: Paul B. Hoeber. Inc., 1943. Price $5.00.

Dr. Alvarez is a most delightful teacher and clinician, and this book is written in a personal form, taking the student or reader along with the doctor while he is interviewing the patient and making a diagnosis. The history is most important, and here is told by example just how to secure a revealing history, one that can be the basis of a diagnosis. Hundreds of diseased conditions and causes of pain or nervousness are discussed, the treatment and the handling of the patient being especially stressed.

Dr. Alvarez' observations while discussing the care of patients are an education. "In some cases I learned later that the reason why a supposed rest cure did not work was that the woman spent all her time worrying over what her husband was up to while she was away from home."

The chapters on telling the patient the truth, on constitutional inadequacy, and on treatment are especially worth reading. The whole book is a fount of inspiration.

ALLERGY. By Erich Urbach, M.D., Chief of Allergy Service, Jewish Hospital, Philadelphia; Associate in Dermatology, University of Pennsylvania School of Medicine; Member of Board of Regents, American College of Allergists; with the collaboration of Philip M. Gottlieb, M.D., Associate on Allergy Service, Jewish Hospital, Philadelphia; Instructor in Medicine, University of Pennsylvania School of Medicine; Fellow of American College of Allergists. New York: Grune & Stratton, 1943. Price $12.00.

Allergy has become a major field in the practice of medicine and this book, of real textbook size, is a complete coverage of the subject in so far as a developing specialty can be completely covered. There are 184 pages of foundation, history, basic principles, incidence, chemistry, antibodies, antigens. Diagnosis of allergic diseases is minutely outlined, with illustrations and diagrams, and specific instructions as to preparations of materials and how to use them.

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In 2,300 citations from the published results of other authors, Dr. Urbach has amassed an inexhaustible reference resource, fairly unsurpassed in scope.

The Appendix furnishes a set of detailed questionnaires for careful and thorough case records, and a table of concentrations for patch testing.

THE PRINCIPLES AND PRACTICE OF INDUSTRIAL MEDICINE. Edited by Fred J. Wampler, M.D., Professor, Preventive and Industrial Medicine, Medical College of Virginia, with 33 contributors. A William Wood Book, Baltimore: The Williams & Wilkins Company, 1943. Price $6.00.

During this period of war effort, with so many of our industrial and traumatic surgeons in the Armed Forces and such tremendous increase in the industrial needs, practically every medical man must at times do industrial medicine. The calls are vastly increased and the doctor must have within easy reach and readily consulted, the very latest knowledge and practice; he must know what his task is, what services to render and how and what reports, records, et cetera, he must be responsible for. Surgery is omitted in this book; it can be found elsewhere. This is a text on industrial medicine, giving facts and aims and treatment of the many recurring conditions resulting from industry. Women in industry have added many diseases and problems, which are included. The subject is well presented, 593 pages of very readable material.

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Yes, you may be in one of our hospitals for awhile. You'll like that, little Madelon. Our doctors will take care of you so the father you've never seen will find a pretty young lady when he comes home again. The doctors will be kindly men who will make you well and strong. They will be gallant and courageous men possessing the most modern equipment and supplies the world has ever known.

CIBA feels a responsibility to you, little Madelon . . . to you and all the small Madelons in every invaded country. We're coming soon . . . we're on the march. Pledged to supply the medical profession in peace and in war with worthy, modern pharmaceuticals to perform their vital missions.

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WAR BULLETINS

PRIORITY RATING FOR EGGS AVAILABLE TO HOSPITALS

Adequate supplies of shell eggs have been assured hospital patients through a priority system established by the War Food Administration. Priority certificates will be issued, however, only if hospitals have exhausted all other means of obtaining eggs.

Although egg production in 1943 is at the highest level in history, officials say that transportation and distribution difficulties may result in temporary scarcities in some areas. Production this year is currently estimated at 60 billion eggs. Roughly, 75 per cent of the total will be available for civilian consumption. This means a per capita average of about 346 eggs, exceeding all previous record use. Egg shortages, if they occur, are likely to be local and of brief duration.

THE SCHICK GENERAL HOSPITAL

The Schick General Hospital, which was formally opened on October 7, is located 3 miles north of Clinton, Iowa. The hospital has a capacity of 1,514 beds and consists of 103 separate structures. The grounds consist of 89.6 acres of land enclosed by an 8-foot wire fence. There are a chapel, laundry, post exchange, post office, ambulance service, recreational facilities and air-conditioned operating rooms. Prior to the formal opening of the hospital there were 2,687 patients admitted (September 30, 1943), of whom 674 were operated on. The first patient was admitted on February 15, 1943, and on the same day the first surgical operation was performed, on a soldier from this command. On the day of the formal opening there were 1,175 patients in the hospital representing every overseas theatre of operation. The allotment of nurses is 120 and of enlisted men 512. These men are being trained as operating room, X-ray and laboratory technicians as well as ward attendants. The staff of the Schick General Hospital trained the enlisted personnel of the Eighth General Hospital before it was sent overseas and is now training the Ninety-First General Hospital. Major General Norman T. Kirk, The Surgeon General, has designated the Schick General Hospital as a Neurosurgical Center. The entire project represents an investment of more than $6,000,000.—JAMA—103043.

The Schick General Hospital was named in honor of Lieut. William Rhinehart Schick, first army medical officer to be killed in action during the current war. Lieutenant Schick graduated from the University of Illinois College of Medicine in 1939 and was appointed a first lieutenant, medical corps reserve, April 28, 1941. He was House Physician, Leila Post Montgomery Mercy Hospital, Battle Creek, Michigan, when appointed and went into service from there.

CARE OF WIVES AND BABIES OF SERVICEMEN

The following announcement was made by the Office of War Information on September 29:

"Servicemen and their families have reason to feel gratified and reassured that Congress has acted so promptly to replenish the funds needed to continue the maternity and infant care program, initiated last March," Miss Perkins said.

"With the additional $18,600,000 now made available in deficiency appropriation by action of the House and the Senate within two weeks of their reconvening, there will be no interruption in this humaritarian service, which was threatened with termination through lack of funds.

"Since the first appropriation for this service made by Congress in March of this year, forty-four states, the District of Columbia, Alaska and Hawaii have submitted plans for coöperation in this program to the Children's Bureau and have received approval from the bureau. Of the remaining four states, Colorado and Texas are at present working out plans; Louisiana and North Dakota have so far failed to submit plans."



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A. James DeNike, M.D., Medical Superintendent

UMBILICAL and INCISIONAL

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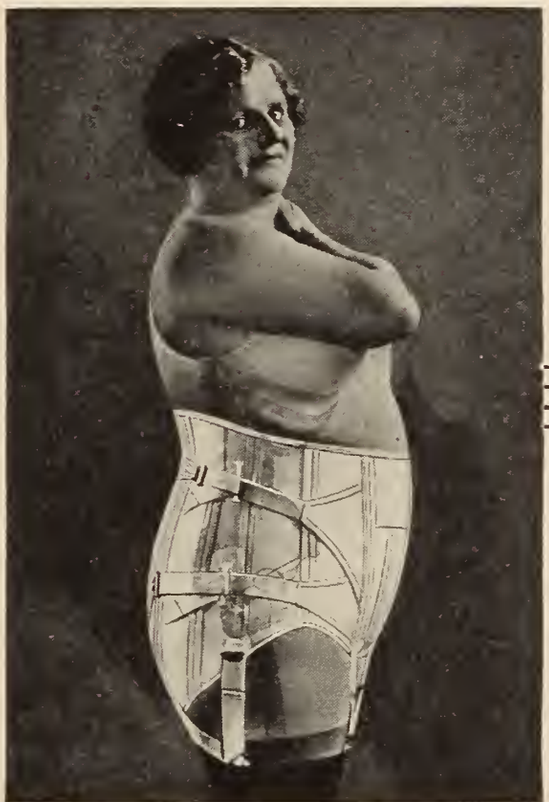
THE reliability of Camp abdominal supports in the giving of relief to patients with incisional and umbilical hernia is well known.

These supports are prescribed for inoperable herniae and for patients who refuse operation; also, for use before operation in order that the abdomen may become accustomed to the presence of the viscera in the cavity.

Many surgeons recognize the additional factor of safety through scientific abdominal support as a postoperative measure after repair of these herniae; also, after operation upon obese patients and those who have had infection of the wound.



Patient with incisional hernia



Same patient after application of support

Camp Supports are of exceptional value in relieving these patients.

- They do not constrict the abdomen because of the foundation laid about the pelvis.
- Camp Supports lift and hold from below . . . upward and backward.
- They transfer the weight from the spine to the pelvis because they steady the pelvis.
- Camp Supports are easily adjusted.
- They are economically priced.

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POLITICAL MEDICINE

What Does Political Medicine Mean for Sick People?

It means that they must depend upon a doctor who:

Is paid by the government—presumably working eight hours per day. The emergency sickness must wait until the doctor is on the job;

Is not the doctor of their choice but one that has been assigned by a political bureaucrat;

Will not have a personal interest in patients who come to him;

Is less knowing and less efficient because he must follow methods and prescribe remedies that are fixed by his bureaucratic superiors;

Realizes his job is political, and therefore is more interested in pleasing or appeasing his political bosses than he is in curing his patients.

How Does Political Medicine Affect Every Person?

For those who may ask, "Why should I be interested in Federalized Medicine?", the emphatic answer is, "Once they have tied the hands of the professions, what is to prevent them from tying the hands of all other groups, including finance, industry and labor?"

The over-all issue is: Human Rights vs. State Slavery.

United States Senators and Congressmen from Michigan

SENATORS
(U. S. Senate, Washington, D. C.)

Arthur H. Vandenberg (Grand Rapids)
Homer P. Ferguson (Detroit)

CONGRESSMEN
(House of Representatives, Washington, D. C.)

1st District	George Sadowski	(Detroit)
2nd District	Earl C. Michener	(Adrian)
3rd District	Paul W. Shafer	(Battle Creek)
4th District	Clare E. Hoffmann	(Allegan)
5th District	B. J. Jonkman	(Grand Rapids)
6th District	Wm. M. Blackney	(Flint)
7th District	Jesse P. Wolcott	(Pt. Huron)
8th District	Fred L. Crawford	(Saginaw)
9th District	Albert J. Engel	(Muskegon)
10th District	Roy O. Woodruff	(Bay City)
11th District	Fred Bradley	(Rogers City)
12th District	John B. Bennett	(Ontonagon)
13th District	Geo. D. O'Brien	(Detroit)
14th District	Louis C. Rabaut	(Grosse Pte. Pk.)
15th District	John D. Dingell	(Detroit)
16th District	John Lesinski	(Dearborn)
17th District	Geo. A. Dondero	(Royal Oak)

What Does Political Medicine Mean for the Public?

$3,048,000,000.00 annually of extra payroll taxes—an average of about $120.00 yearly for each family;

150,000 additional bureaucrats to tell patients where to go and doctors what to do and how to treat human beings who are sick;

The sacrificing of the highest level of health and the most effective medical care ever known.

History shows that, if the Medical Profession is regimented, it will represent a decisive step forward toward establishing centralized Federal Control of all the professions and industry, and the destruction of Freedom of Enterprise in the United States.

In the 1850's Bismarck started the general socialization of Germany with the regimentation of Medicine. Now, in 1943, in the excitement of war, the most revolutionary proposal ever made to the American people is offered. Using the language of the true humanitarian, the scheme is so great and of such sinister menace that few Americans comprehend it. But this must be understood by those Americans who still desire some freedom: The Wagner-Murray Bill. If passed, is the vehicle that will most quickly transform a rapidly expanding Federal bureaucracy into an all-powerful totalitarian state control.

WHAT ARE THE IMPLICATIONS OF THE WAGNER-MURRAY BILL (S. 1161)?

They are far wider than their immediate effect on the medical and hospital professions. They touch the already heavily burdened taxpayer and are part and parcel of a pattern of socialization of finances, banking, insurance; they even extend to housing, federal ownership of land and other real estate, and many other phases of ordinary life. How? Because, if the present dangerously bloated bureaucracy (which establishes controls by edict) is expanded and becomes so powerful by virtue of its numbers and ramifications that it regulates the individual lives of men, complete centralized control will be quickly reached even under our constitutional forms.

This issue must be decided by the people—the voters of the United States. Show this to your neighbor. Talk to him about it. Request him to talk or write to your Senators and Congressmen.

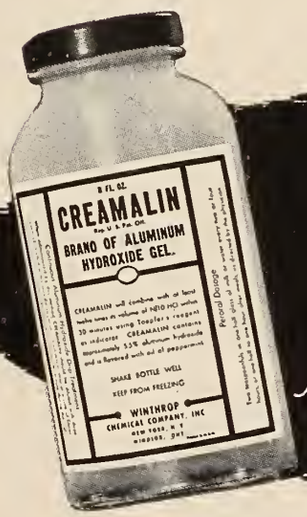
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WHO MAY PRESCRIBE DRUGS?

The clear-cut opinion of Herbert J. Rushton, Attorney General of Michigan, dated September 16, 1943, that "osteopaths have no general right to administer or prescribe drugs for internal human medication"* has been superseded by a second opinion of the Attorney General on this subject, handed down September 29, 1943, which states: "We are informed that the question is due to be presented to the courts and, in view of these facts, we do not undertake to express an opinion on the question."

The September 29 opinion (0-997) is as follows:

Office of Price Administration
Detroit District Office
600 Griswold Street
Detroit 26, Michigan

Attention: Mr. Harlan P. Cristy
Chief Rationing Attorney

Dear Sir:

We have your inquiry as to what persons are licensed by the law of this state to prescribe drugs for internal human medication.

You assume, and correctly so, that the license to practice medicine and surgery would authorize the holder to prescribe all drugs for internal human medication. You include "homeopaths" in your list of those engaged in the various branches of the healing arts. The homeopathic theory of medicine is embraced within the general Medical Act of this State and those who follow the theory of homeopathic medicine are accorded all the privileges provided in the act in relation to the practice of medicine.

In Michigan the licenses to practice the various branches of the healing arts are confined to the practice of medicine, osteopathy, and chiropractic. There is also provision in the Medical Act for the issuance of a license to so-called "drugless practitioners" who, of course, do not have the right to administer medicine. There is no license provided in our law for the practice of "naturopathy." There are, of course, those engaged in limited fields of healing such as chiropodists and optometrists. Neither of these groups may administer medicine for internal use. I might add that the practice of nursing does not authorize the licensee to administer drugs except under the supervision and direction of a physician.

For the purpose of this act chiropractic is defined as "the locating of misaligned or displaced vertebræ of the human spine, the procedure preparatory to and the adjustment by hand of such misaligned or displaced vertebræ and surrounding bones and tissues."

The right to administer drugs does not come within the definition of chiropractic.

Considerable controversy has arisen as to the right of osteopaths to administer or prescribe drugs for internal human medication. The Supreme Court of the State of Michigan has not passed on this question. It is apparent that an opinion from this office on the question will have no effect on the course of action of either of the parties to the controversy. Only a judicial determination can properly settle the matter. We are informed that the question is due to be presented to the courts and, in view of these facts, we do not undertake to express an opinion on the question.

Yours very truly,

HERBERT J. RUSHTON,
Attorney General.
By JOHN R. DETHMERS,
Chief Assistant Attorney General.

*Published in MSMS Journal, October, 1943, p. 830.

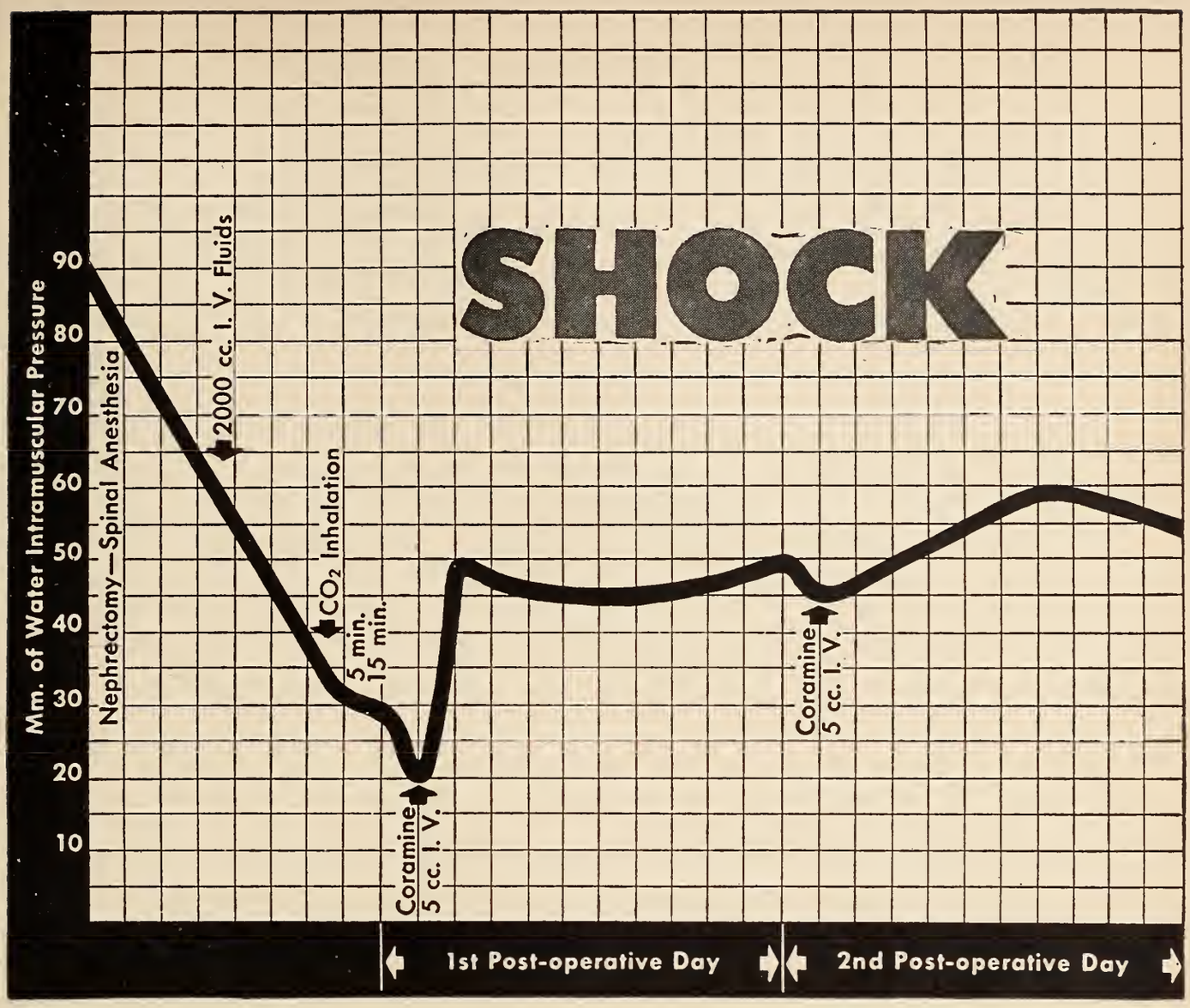
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SHOCK is a complex syndrome having many causes and presenting many symptoms. Recent research[1] has demonstrated that in post-operative and post-anesthetic shock *intramuscular pressure drops before venous pressure fails.* This intramuscular pressure is of greatest importance in maintaining peripheral circulation and venous pressure is returned to normal by a restoration of intramuscular pressure.

CORAMINE,* of all the drugs tested, was found to promptly and spectacularly increase intramuscular pressure to normal. It was used intravenously in doses of 5-10 cc.

[1]Gunther, Lewis, Engelberg, Hyman and Strauss, Ludwig., INTRAMUSCULAR PRESSURE, Am. J. Med. Sci., 204, 266-283, Aug., 1942.

CORAMINE

COMBATS SHOCK

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*Trade-Mark Reg. U. S. Pat. Off.

CIBA *Pharmaceutical Products, Inc.*

SUMMIT, NEW JERSEY

Say you saw it in the Journal of the Michigan State Medical Society

ECHOES OF THE 1943 WAR CONFERENCE

A total of 2,002 persons registered at the 1943 Postgraduate Conference on War Medicine of the Michigan State Medical Society, held at the Statler Hotel, Detroit September 22-23-24. The 78th Annual Session attracted one of the largest registrations in the history of the Society:

Doctors of Medicine	1,713
Guests	90
Exhibitors	199
GRAND TOTAL	2,002

* * *

What some of the guest speakers wrote about the 1943 War Conference (unsolicited):

Edward A. Schumann, M.D., Philadelphia: "I had a delightful time at your 1943 War Conference and am deeply grateful for the beautiful hospitality you and your group extended to me. I enjoyed every moment of my stay and am very happy to have been honored with an invitation."

* * *

Hobart A. Reimann, M.D., Philadelphia: "Let me assure you that I had a pleasant time and hope that the talk was profitable to the audience. I must also say that I have never participated in a state medical meeting which was so well managed as yours."

* * *

Harry R. Foerster, M.D., Milwaukee: "Thanks for your recent courtesies at the 1943 Michigan State Medical Society War Conference. I think your discussion conference idea or discussion of papers by small groups is splendid."

* * *

Peter C. Kronfeld, M.D., Chicago: "Let me assure you that it was a true pleasure attending your 1943 meeting."

* * *

Colonel Grover C. Penberthy, M. C., Omaha: "I want to congratulate the Michigan State Medical Society for developing such a fine program and putting on such a fine War Conference. It seemed like old times for me and I want to thank you and the officers for making it possible for me to be back with you all."

* * *

The Bruce Publishing Company, 2642 University Avenue, Saint Paul, Minnesota, publishers of the MSMS Journal, contributed 2,000 notebooks for use by the registrants at the 1943 MSMS War Conference in Detroit. The Society appreciates the continued generosity of the Bruce Publishing Company, and wishes to thank its President, Mr. J. R. Bruce, for his thoughtfulness and courtesy.

CREDIT IS DUE

Two postgraduate credits are given by the Michigan State Medical Society to all of its members who registered and attended the 1943 War Conference of the Society, held in Detroit, September 22, 23, 24.

The total registration of Doctors of Medicine at the 78th Annual Session of the Michigan State Medical Society was 1,713.

Names of those registering on Monday, Tuesday and Wednesday, September 20, 21, and 22, 1943, were published in the November issue of The Journal.

Those registering on Thursday, September 23, included:

H. L. Abbott, Detroit; A. O. Abraham, Hudson; V. M. Adams, Marcellus; John E. Affeldt, Detroit; James J. Aiuto, Detroit; E. S. Alford, Belleville; Francisco Alarco, Lima (Peru); W. D. Albert, Leslie; Reuben G. Alexander, Laingburg; Walter C. Alvarez, Rochester; Florence Ames, Monroe; H. B. Anderson, Watervliet; Susanne M. Anderson, Detroit; William K. Anderson, Saginaw; George H. Andries, Detroit; Raymond C. Andries, Detroit; J. W. Ankley, Detroit; Robyn J. Arrington, Detroit; Capt. Bellfield Atcheson, Lacarne, Ohio; R. M. Atchison, Northville; Arnold Axelrod, Detroit.

Myra Babcock, Detroit; F. H. Bachman, New York; Walter F. Bach, Detroit; Vinton A. Bacon, Detroit; George M. Baker, Parma; Henry F. Balconi, Jackson; Milner S. Ballard, Grand Rapids; Charles S. Ballard, Detroit; L. Banner, Kalamazoo; O. Fenton Banting, Mt. Clemens; Kenneth C. Banting, Port Huron; Leo H. Bartemeier, Detroit; Paul H. Bassow, Ann Arbor; George Bates, Kingston; R. H. Baugh, Ypsilanti; Watson Beach, Detroit; S. M. Beatty, Highland Park; F. H. Bech, Port Huron; William Becker, Toledo (Ohio); W. C. Behen, Lansing; Clarence A. Berge, Detroit; Herman Beuker, Marshall; Nathan J. Bicknell, Detroit; Sydney K. Beigler, Detroit; Norbert M. Bittrich, Detroit; E. W. Blanchard, Deckerville; William E. Blodgett, Detroit; Earl Bloomer, Dearborn; William E. Bloomer, Virginia University (Va.); Harold Louis Bock, Detroit; John D. Boehm, Detroit; F. M. Boothby, Lawrence; M. E. Bovee, Port Huron; Frank E. Bowman, Detroit; Andrew H. Bracken, Dearborn; D. S. Brachman, Detroit; G. T. Bradley, Detroit; Muriel J. Bradley, Detroit; Edward R. Breitenbecher, Detroit; Barton E. Briggs, Fort Custer; A. L. Brooks, Detroit; Karl B. Brucker, Lansing; C. F. Brunk, Detroit; Daniel Budson, Detroit; John T. Burns, Kalamazoo; Mary Lou Byrd, Grand Rapids; S. J. Buist, Grand Rapids; Frank L. Bull, Sparta; John W. Bunting, Alpena; Henry Burkhardt, Ann Arbor; George C. Burr, Detroit.

Anthony D. Calomeni, Saginaw; A. H. Cameron, Wyandotte; Allan K. Cameron, Saginaw; Alice F. Campbell, Albion; L. A. Campbell, Saginaw; Clarence L. Candler, Detroit; E. K. Carmichael, Detroit; Glenn B. Carpenter, Detroit; Roscoe W. Cavell, Detroit; V. George Chabut, Detroit; Harold F. Chase, Detroit; Mario S. Cioffari, Detroit; Corwin S. Clarke, Jackson; Norman E. Clarke, Detroit; Harold E. Claris, Detroit; Ronald E. Clark, Detroit; Charles H. Clifford, Detroit; C. A. Coates, Detroit; L. F. Cobb, Pontiac; Don A. Cohoe, Detroit; Fred H. Cole, Detroit; Frederick A. Coller, Ann Arbor; E. R. Conrad, Detroit; R. M. Cooley, Jackson; Geo. J. Cooper, Jr., Detroit; J. E. Cooper, Battle Creek; J. C. Corsaut, Mason; A. J. Cortopassi, Saginaw; Louis D. Cotaruro, Detroit; Joseph M. Croman, Mt. Clemens; Frank S. Cross, Lansing; Henry F. Crossen, Detroit; E. B. Cudney, Pontiac; F. S. Curry, Detroit; George J. Curry, Flint; Hampton P. Cushman, Detroit; Paul L. Cusick, Battle Creek.

Albert P. Dado, Ft. Custer; Xavier daSilveira, Rio de Janeiro, Brazil; W. A. Dawson, Detroit; Russell N. DeJong, Ann Arbor; C. E. DeMay, Jackson; A. James DeNike, Detroit; Joe DePree, Grand Rapids; J. S. Detar, Milan; David D. DeWeese, Ann Arbor; John M. Dorsey, Detroit; Harold Drankaus, Detroit; James C. Droste, Grand Rapids; C. T. DuBois, Alma; Henry A. Dunlap, Detroit; F. Mansol Dunn, Lansing; H. C. Dunstone, Ypsilanti; Frank Diskin, Muskegon.

M. C. Edsall, Wheatley (Ont.); Albert C. Edwards, Port Huron; B. R. Elliott, Ovid; Otto K. Engelke, Ann Arbor; A. R. Ernst, Jamaica (N. Y.); John W. Evers, Flint; R. T. Ewing, Monroe.

Joseph H. Failing, Ann Arbor; Simon S. Farbman, Detroit; David H. Fauman, Detroit; Karl D. Figley, Toledo (Ohio); Edward Fine, Detroit; Ray L. Fellers, Detroit; Fred B. Fisk, Jonesville; A. J. Font, Detroit; Chas. T. Foo, St. Johns; B. L. Franklin, Remus; Robert C. Fraser, Port Huron; Hugo A. Freund, Detroit; Carl H. Frye, Ann Arbor; A. C. Furstenberg, Ann Arbor.

L. Galdonyi, Detroit; Dugald A. Galbraith, Lansing; W. C. Gamble, Bay City; Howard B. Garner, Detroit; L. W. Gatley,

(Continued on Page 944)

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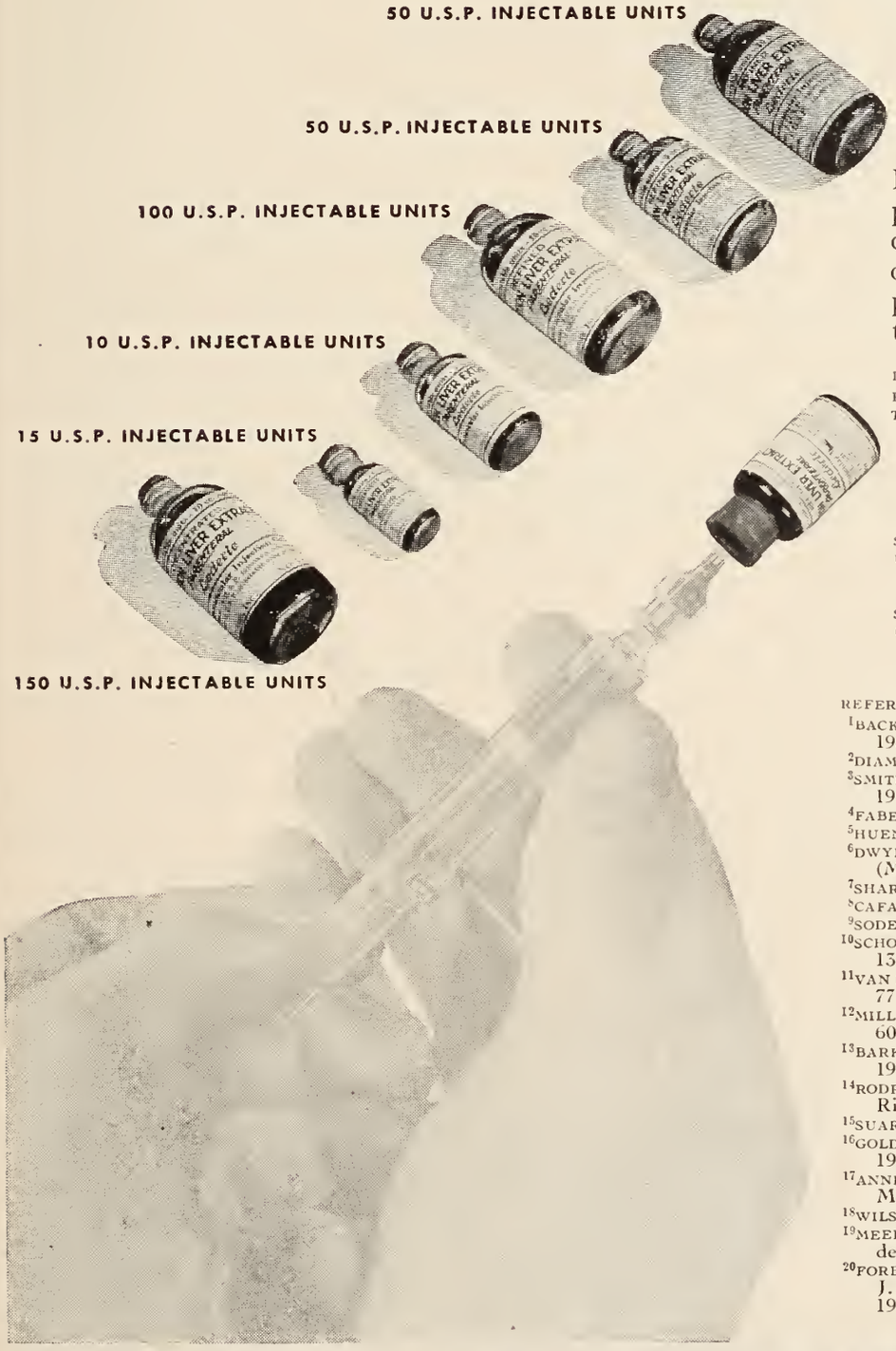
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- Macrocytic anemias of pregnancy [7, 8, 9]
- Sprue [10, 11, 12, 13, 14, 15.]
- Anemia associated with Hepatic insufficiency [16, 17, 18, 19, 20.]

It is believed that further trial of parenteral liver extracts in these conditions, in addition to all the other measures indicated, will prove a valuable addition to therapy.



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- 1—10 cc. vial (10 U. S. P. injectable units per cc.)

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- 3—1 cc. vials (15 U. S. P. units each)
- 1—10 cc. vial (150 U. S. P. units)

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Literature on request.

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(Continued from Page 942)

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The next written examination and review of case histories (Part I) for candidates will be held in various cities of the United States and Canada and by special arrangements at Army and Navy Stations on Saturday, February 12, 1944 at 2:00 P.M. Candidates who successfully complete the Part I examination proceed automatically to the Part II examination held later in the year. All applications for this year's examinations must be in the office of the Secretary, 1015 Highland Bldg., Pittsburgh (6), Pennsylvania, by November 15, 1943.

Arrangements will be made so far as possible for candidates in military service to take the Part I examination (written paper and submission of case records) at their places of duty, the written examination to be proctored by the Commanding Officer (medical) or by a Medical Officer designated by him. Material for the written examination will be sent to the proctor several weeks in advance of the examination date. Candidates in military service who wish to do so may send their case records in advance of the examination date to the office of the Secretary. All other candidates should present their case records to the examiner at the time and place of taking the written examination.

The place of the Board's Part II examination in May or June, 1944, has not yet been decided, but it is likely to be held in that city nearest to the largest group of candidates. The exact time and place will be announced later.

If a candidate in Service finds it impossible to proceed with the examinations of the Board, so that his plans are thus interrupted, deferment of parts of these without time penalty will be granted under a waiver of the published regulations covering civilian candidates.

For further information and application blanks, address Dr. Paul Titus, Secretary, 1015 Highland Building, Pittsburgh (6), Pennsylvania.

SERVICEMEN ELIGIBLE FOR BOARD EXAMINATIONS

The Office of the Surgeon General (U. S. Army) has issued instructions that men in Service, eligible for Board examinations, be encouraged to apply and that they may be ordered to Detached Duty for the purpose of taking these examinations whenever possible. The Office of the Surgeon General of the U. S. Navy presumably takes a similar attitude on this matter.

Horrible though war is, it has stimulated medical advances. Some of the world's great medical discoveries have been made by military surgeons, particularly in connection with field service. Every war has added to the sum of medical knowledge.--*Science News Letter.*

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Prognosis of Poliomyelitis and Treatment of the Commonly Fatal Types*

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Detroit, Michigan



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Fatality in poliomyelitis is varyingly reported from 5 to 20 per cent due to irregular detection of mild cases. A case fatality rate under 5 per cent should be expected nowadays. Although with careful and expert muscle examination, two-thirds of all cases may show detectable weakness, less than one-fifth may be expected to have handicapping paralysis. Few diseases show such spontaneous variation in the appearance and disappearance of paralysis. No therapeutic study should be seriously considered except one with quantitative muscle examination of large numbers with alternate case controls. Classic errors of the past are mentioned.

■ There are certainly few diseases other than poliomyelitis which present themselves with such a variety of clinical manifestations or whose course varies over a greater range. A patient may have no paralysis, may die in twenty-four hours, or may live with extensive paralysis to a ripe age. Prognosis is indeed difficult. So far the experience of the past gives us a great deal of fairly exact data to guide us, but whatever we learn from the past may well be changed by what we are all waiting to hear when our guest, Miss Kenny, speaks to us.

We are concerned with two problems in prognosis: The possibility of death and the possibility of paralysis.

The prognosis as to life necessitates discussion of the fatal types of poliomyelitis and something of their treatment. We would have expected that mortality figures concerning this disease should be definite and accurately recorded no matter how difficult it may be to get similar records of paralysis. However, even here we run into great discrepancies. Fatality rates varying from five to 25 per cent are reported. There is no question but that certain epidemics are more severe than others, but a great deal of the variations reported are only apparent and not real, due to the inclusion or failure of inclusion by physicians of numbers of cases of quite definite but mild poliomyelitis. In a community where the doctors are very much on their toes, a large number of preparalytic patients who ultimately show no paralysis are discovered that in other communities would go quite undiagnosed. Frequently we can detect patients with definite poliomyelitis and with abnormal spinal fluid who have only the slightest stiff neck or back, which we surely would have missed if our attention had not been called to them by more striking and obvious cases in a family group. The mortality rate is apt to be greater in small than in large outbreaks. This again to a great extent is due to a more accurate diagnosis of mild cases during epidemics. In general, in modern times we can expect a mortality rate under five per cent in a community where the doctors are well aware of the disease, though a higher rate is in general reported. Of these, probably four out of five die with bulbar symptoms, the others with paralysis of the respiratory muscles.

*Read at the seventy-seventh annual meeting of the Michigan State Medical Society, Grand Rapids, September 25, 1942.

Very briefly we can discuss the treatment of the types of diseases which produce the deaths in poliomyelitis. A small proportion of patients will die due to paralysis of the respiratory muscles, that is, the intercostal muscles and the diaphragm. These are not instances of bulbar poliomyelitis. The treatment of respiratory muscle paralysis is relatively simple and consists of the use of the respirator. It has unfortunately been altogether too much dramatized. The respirator will prevent the patient from dying of respiratory muscle paralysis if that is all that is endangering his life. The use of these machines is justifiable only if there will be a return of muscle function. Those of us who have had much experience have seen many pathetic cases kept alive with an extreme paralysis which seems to make their continued existence unjustified. On the other hand, we are quite unable to tell during the acute stage whether the prognosis is hopeless.

Almost the first patient ever treated in the respirator was so extensively paralyzed that only motion of his fingers and toes, face and pharyngeal muscles could be detected. It was a tremendous job to give the simplest nursing care to him in the respirator, since loss of any single respiration by the machine was distressing to him. A few months later, having been given practically no treatment, he walked by himself to the front of an auditorium and addressed a large group of people. Such recovery is unfortunately not always to be expected, but illustrates the difficulty in prognosis, as well, incidentally, in evaluating treatment.

It requires a great deal of judgment to know when a respirator should be used. I have felt that it should be used before respiratory paralysis is great and to prevent as much respiratory distress as possible. The deep almost coma-like sleep of exhaustion which some of these patients who seem only mildly paralyzed will show after becoming adjusted to a respirator has seemed to me convincing evidence of the need for such therapy in these cases.

The bulbar cases, so-called, loom far more important as a cause of death, and, of course, unless they have in addition respiratory paralysis, the respirator has no part to play. I have for many years been interested in trying to dissect and analyze the confused symptomatology which they present, and I feel that a great deal can be done that often is not done, to save the lives of some of them. One must make clear that general rigid rules of treatment for all bulbar patients must be avoided, since each is a problem in itself. The emotional characteristics of the patient play a great part and the high strung, apprehensive victim is a much more serious problem than the patient with a more phlegmatic temperament. There is no question but that many of them die with damage to what we must rather vaguely call their vital centers. Their vasomotor system is upset. The vagas nucleus is apparently destroyed allowing an extraordinarily rapid heart rate with dilatation of the heart, and there are often gross disturbances in the central control of respiration. In spite of many reports of uncontrolled studies of small series apparently showing favorable results with various forms of therapy, it is probable that we can do little to influence the course of this type of poliomyelitis.

There is, however, another group of symptoms often associated with this central brain stem involvement, but sometimes independent of it, which are quite treatable. Most so-called bulbar poliomyelitis patients cannot swallow; neither can they effectively cough. The difficulty in swallowing is transitory and the worst is usually over in a week, and we would not be concerned with it in itself since it leads to nothing but temporary disturbances in nutrition. The dangerous effect of pharyngeal paralysis is due to the unswallowed pharyngeal secretions, much more marked and troublesome in some than in others, which seriously interfere with inspiration. Pharyngeal paralysis can interfere with respiration so seriously that each breath has to be a calculated and planned effort, making sleep impossible. Serious aspiration is frequent. An attack of choking may lead to anoxia, which may change the course of the disease immediately and dramatically for the worse. It is probable that fatigue plays a very direct and important part in the immediate bad prognosis. These patients must be treated with postural drainage, and nothing should be given to them by mouth by any technique, including tube feeding, because of the danger of vomiting. The gentlest type of nursing must be used to reduce their apprehension as much as possible. Means for mechanically aspirating secretions from their pharynx should be at hand. I should like to emphasize that occasionally a tracheotomy is a life-saving procedure. Many years ago, I first saw such a radical procedure carried out, and I have

since many times been convinced of its wisdom. Tracheotomy is indicated in certainly less than one in ten patients with "bulbar" poliomyelitis, in only some of those with extensive pharyngeal paralysis. When a high strung patient cannot relax and when the mere process of aspiration so frightens him that it increases pharyngeal secretions and initiates a vicious circle, a tracheotomy may bring about as dramatic a relief as we see in intubation in laryngeal diphtheria and the patient may sink into a deep sleep of exhaustion. It should be emphasized that there is almost 100 per cent recovery of the pharyngeal muscles if life can be preserved through the first week of the disease.

Prognosis for Paralysis

In considering the prognosis for paralysis, I will limit myself to the early paralysis in poliomyelitis. Most pediatricians like myself lose track of these patients when they are through with the acute stage of the disease and turn them over to the orthopedists. It is obvious that a great deal of paralysis is spontaneously recovered from progressively over a period of many months and even years. Sometimes quite extraordinary recoveries are seen months after the acute phase of the disease. There are a few good reports of quantitative muscle examinations repeated over a long period offered by the orthopedists in the past, but, as a matter of fact, there exists in the literature very few critical analyses of the effects of the different treatments so long advocated. In reports about paralysis in general, we must understand that the significance of statements about percentage of recoveries implies an all or none state of paralysis, and a more accurate report would necessarily be on some basis of quantitation of the degree of paralysis.

Consideration of the prognosis for paralysis brings us to analyze a large number of series which vary greatly in reported results. This variation is due to rather obvious reasons, that is, variations in the accuracy and thoroughness with which muscle examination has been carried out. The history of poliomyelitis is replete with reports of apparently successful therapeutic procedures which do not stand up under critical analysis. Poliomyelitis furnishes one of the best illustrations in medicine of the necessity for accurately recorded clinical observations and for controlled clinical experimentation. In the reports of seven independent studies of the use of convalescent serum, the proportion of paralyzed patients averaged only 27 per cent. In a series of patients treated with streptococcus antiserum, an incidence of paralysis as low as 14 per cent was reported. In another series from Michigan treated by spinal drainage alone, an occurrence equally as low apparently occurred. Another series in which only diagnostic lumbar puncture was carried out, yielded a report of paralysis of 20 per cent. A great number of uncontrolled clinical studies have been reported with equally successful results. We can doubt the accuracy of muscle examination in many of these studies. One of the best estimations of the degrees of paralysis comes from the statistical studies which were carried out in New York and Massachusetts over a period of four or five years a decade or so ago. In these studies, quantitative determination of the degree of paralysis in each of over 100 separate muscle groups are attempted, and, although no mathematical expression of the degree of paralysis is possible, nevertheless such studies gave us the best possible idea of what happened to many hundreds of patients.

In a group of cases reported in Massachusetts who were given convalescent serum in the stage before paralysis could be detected, paralysis later occurred in 65 per cent. Later years confirmed this rather high figure, which is far greater than those I have already mentioned. The answer lies to a very great part in the detection by the skilled examiners of these cases of a great many degrees of slight paralysis, weaknesses if you please, which I am sure many of us here would have missed. As a matter of fact, 75 per cent of all cases escaped with what we may consider no important or handicapping paralysis. Now the paralysis reported by these same observers in a group of so-called untreated cases was considerably higher, and the first studies of the use of canvalescent serum convinced a great many observers to the point of enthusiasm of the great value of this method of treatment. Probably these studies, which extended over a period of years and involved some thousands of patients, may be considered almost a classical example of a common error in experimental medicine. When properly controlled studies were made with alternate cases diagnosed in the preparalytic stage receiving the serum, no significant effect was discovered. The first experiments were unsound inasmuch as the so-called "control" group not given

serum was composed of those whose very diagnosis was made by the existence of paralysis and could offer therefore no suitable comparison with those diagnosed in the preparalytic stage. Although these studies are now well in the past they do furnish us with many records of cases which we may consider uninfluenced by treatment, which demonstrate that careful muscle examination will show that a rather high per cent of all patients will have some slight paralysis, but that a figure certainly as low as 25 per cent represents the probability of handicapping paralysis occurring in the early stage of poliomyelitis. It took us many years to learn how many patients with meningeal symptoms really escaped serious paralysis with no treatment at all, although this had been pointed out by some observers long ago.

There are certain features of the disease that offers us hints for immediate prognosis and others that often mislead us. The spinal fluid offers us no guide. A high cell count often occurs with no paralysis and there is evidence that the fatal types of bulbar poliomyelitis have often a low cell count.

A high fever at the very onset, 103° or 104°, occurs more frequently in the bulbar type. It is probable that an early onset of paralysis, that is, a few hours after the onset of the first meningeal symptoms is usually associated with a more severe degree of paralysis. Muscle tenderness, and I am not talking of spasm but of the crude and marked tenderness that many patients show, is a hindrance in prognosis, it seems to me, rather than a guide. Severe muscle tenderness is often followed by no paralysis and we will see epidemics with serious paralysis in which muscle tenderness is meager. It is sometimes extremely difficult to tell by a physical examination in a child with muscle tenderness whether or not there is paralysis, and again and again we see an apparent dramatic recovery, which is nothing more than the disappearance of a pseudo-paralysis. Pediatricians have long been accustomed to seeing pseudo-paralysis, particularly in small patients with tenderness due to scurvy, green-stick fracures, et cetera, and it seems to me obvious that a counterpart occurs in poliomyelitis. The commonest pseudo-paralysis is in the anterior neck muscles, which again and again seem paralyzed due to pain on forward flexion but which show complete recovery as soon as the pain disappears.

Certain types of paralysis have a specially good prognosis. There is some sort of paralysis of the intestines and quite definitely of the bladder in many cases of poliomyelitis. They will all 100 per cent spontaneously recover from it. Paralysis of the pharynx and the palate will almost invariably be recovered from if the patient lives. One of the mysteries of poliomyelitis is why this is true. I have seen only one patient out of a great many who had such pharyngeal paralysis that he had to be gavaged a year after the acute stage of the disease, and even here there was much to make us believe that a neurosis was involved.

The recovery that will take place after the acute stage when pediatricians lose their patients to the orthopedists is better reported by others.

MSMS

TREATMENT FOR HEAD LICE

The formula of a lotion which proved to be quite satisfactory for the treatment of head lice and their eggs on children in an American hospital and on civilian populations in Mexico and which is recommended for general use in the control of head lice is reported in *The Journal of the American Medical Association* for November 27 by William A. Davis, M.D., New York.

In the introduction to his report, Dr. Davis explains that "As part of a general program to devise methods for the control of typhus fever a systematic study was undertaken with a view to determining the louse-killing properties of various chemical agents. . . ." He points out that there are many objections to the older methods for the control of head lice and says that "The ideal method for treating pediculosis capitis should be by a lotion, since only a liquid can easily penetrate the entire hair and leave a residual for prolonged action. The fluid should rapidly kill lice and nits, should not have unpleasant properties such as greasiness, staining or odor and should be both cheap and lasting. Systemic laboratory studies revealed several materials with these properties. Phenyl cellosolve and benzyl cellosolve were the most efficient and were readily available. . . . For simplicity only phenyl cellosolve was used on human beings."

The formula used was phenyl cellosolve 40 per cent, ethanol 30 per cent, water 25 per cent and methyl salicylate (as in perfume) 5 per cent. In the investigation in a New York hospital, the lotion was applied on fifty children as soon as lice were discovered. It was applied so that the hair was thoroughly wet, and the nurses were cautioned to keep the fluid out of the eyes and the mouths of the children. No further treatment was used. No lice were ever found after a single treatment.

Sulfadiazine Agranulocytosis*

By Robert A. Hettig, M.D.
and
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The development of granulocytopenia during sulfadiazine therapy has only been reported twice in the medical literature. Both of these case studies appeared quite recently although the drug has been in general use for well over a year. The authors present three additional case histories of agranulocytosis following sulfadiazine administration and point out that prolonged use of this drug may be dangerous even though the daily dose be quite small. The possibility that vitamin deficiencies may have a contributing role in the production of the agranulocytic syndrome is discussed briefly.

With the introduction of sulfadiazine into clinical medicine, it was hoped that a potent therapeutic agent without undesirable reactions would be available to the medical profession. Experience has shown, however, that it is not a perfect drug. In common with other sulfonamide drugs, it may produce any one of several highly undesirable side effects. Of these complications, agranulocytosis was reported recently for the first time by Levin and Bethell[3] although Long[4] had previously described a leukopenia in two of his series of 125 treated patients. Curry[1] has also recently published a report of agranulocytosis with recovery following withdrawal of this drug.

Since there is a paucity of literature on the subject of sulfadiazine agranulocytosis, we wish to report two additional cases and to include for purposes of analysis the patient first reported by Levin and Bethell.

Case 1.—C. G., No. 377037, was an eighty-year-old white man who had been observed at the University of Michigan Hospital on numerous occasions since 1936 with the diagnosis of arteriosclerotic heart disease, pellagra, and obesity. His last admission was on June 26, 1942, with the history of increasing dyspnea, orthopnea and dependent edema. Physical examination revealed an enlarged heart, basilar pulmonary rales, gross dependent edema, and a right hydrothorax. The admission blood examination showed 102 per cent hemoglobin, 5,000,000 red blood cells, and 10,000 white blood cells per cubic millimeter with a differential count of 80 per cent polymorphonuclear neutrophils, 14 per cent lymphocytes, and 6 per cent monocytes. The platelets appeared to be normal in number. Two venesections of 250 c.c. each were done within twenty-four hours after admission to relieve severe left-sided heart failure and digitalis was given in adequate doses. In addition, mercupurin was administered intravenously producing a massive diuresis. In association with this he developed urinary retention which necessitated the use of an inlying catheter. On June 29 (the third day of hospitalization) at the suggestion of the urologist, sulfadiazine therapy, two grams daily, was begun. Since cystoscopic examination revealed an intravesical protrusion of the prostate, accounting for the urinary retention, a transurethral prostatectomy was performed on the thirty-sixth day of hospitalization. At this time the patient was still receiving 2 grams of sulfadiazine daily. On the third postoperative day, August 3, 1942 (thirty-ninth day of hospitalization) a progressively rising fever developed and the leukocyte count on August 6 (sixth postoperative day or forty-second day of hospitalization) was 1,650 per cubic millimeter. No polymorphonuclear cells were found on the stained blood film. Sulfadiazine therapy was immediately discontinued. Over the course of the next ten days the patient received five small (250 c.c.) transfusions of freshly citrated blood and 190 c.c. of pentnucleotide intramuscularly. Despite this therapy his course was progressively downhill and death occurred on the fifty-second hospital day. A terminal rise in the leukocyte count to 5,300 per cubic millimeter with 80 per cent polymorphonuclear cells was noted immediately before death. Postmortem examination confirmed the diagnosis of agranulocytosis following sulfadiazine therapy.

Case 2.—B. I., No. 510561, was a fifty-four-year-old white housewife who entered the Simpson Memorial Institute of the University of Michigan on August 20, 1942. In March, 1942, on the advice of her physician, the patient commenced an anti-obesity regimen which resulted in a loss of 25 pounds during the following four months' period. On or about July 1, 1942, she had developed a severe pharyngitis with fever and malaise for which sulfadiazine therapy was instituted. During the ensuing seven days she re-

*From the Thomas Henry Simpson Memorial Institute for Medical Research, University of Michigan, Ann Arbor, Michigan. Read at the seventy-seventh annual meeting of the Michigan State Medical Society, Grand Rapids, September 25, 1942.

TABLE I. RESUME OF CASES REPORTED

Patient	Sex	Age	Reason for Sulfadiazine Therapy	Total Dosage	Duration of Therapy	Leukocyte Count			Sternal Marrow	Treatment
						Before Treatment	Minimum	Terminal		
C. G. No. 377037 Case 1	M	80	Urinary retention and incontinence. Inlying catheter. Prophylactic treatment	76 gm.	38 days	8,350 (80% PMN)	750 (0% PMN)	5,300 (80% PMN)		Transfusion Pentnucl.
B. I. No. 510561 Case 2	F	54	Pharyngitis Chills and fever	74 gm.	22 days	—	850 (0% PMN)	1,900 (0% PMN)	Hypoplastic, maturation arrest at promyelocyte stage	Transfusion Pentnucl. Yellow bone marrow extract.
W. B. No. 492631 Case 3	M	70	Incarcerated hernia. Pulmonary consolidation	76 gm.	19 days	5,350	850 (2% PMN)	750 (2% PMN)	Maturation arrest at myelocyte stage	Transfusion Pentnucl.

ceived 24 grams of the drug. Treatment was then terminated but was resumed two weeks later on account of recurrent chills and fever without localizing symptoms. Eight grams of sulfadiazine were consumed in a period of eight days. Again the patient improved and the medication was discontinued. A few days later, however, she developed an episode of chills, fever and right pleuritic pain and sulfadiazine therapy was begun for the third time. Forty-two grams of the drug were administered over a seven-day period at the end of which time the attending physician first examined the blood and found the leukocyte count to be 3,950 per cubic millimeter. The drug was then discontinued, and following three days of pentnucleotide therapy at home, the patient was admitted to the Simpson Memorial Institute for further care. She appeared acutely ill and her temperature was 104.4 degrees. On her left cheek and right shoulder were two red papular lesions with desquamating centers. In the right antecubital fossa there was a superficial phlebitis evidently arising at the site of an old venipuncture wound. A tender enlarged lymph node was noted in the right axilla. The pharynx was diffusely reddened. The remainder of the physical examination was essentially negative. Admission blood studies revealed a red cell count of 4,600,000 per cubic millimeter, hemoglobin of 11.1 grams or 71 per cent, white blood cell count of 1,650 per cubic millimeter with a differential count of 96 per cent lymphocytes and 4 per cent monocytes. No polymorphonuclear cells were seen. The platelets appeared moderately increased in number. The patient's course in the hospital was progressively downhill in spite of attempts to stimulate granulocyte production by the intramuscular injection of 280 c.c. of pentnucleotide over a period of seven days. The patient also received three small (250 c.c.) transfusions of freshly citrated blood and yellow bone marrow extract (Armour's), eight capsules daily per os. The leukocyte count fluctuated between 850 and 4,000 cells per cubic millimeter but at no time did polymorphonuclear cells appear in the peripheral blood. The patient became comatose and died on the eighth day of hospitalization. Autopsy was performed and the diagnosis of agranulocytosis following sulfadiazine treatment was confirmed.

Case 3.—W. B., No. 492631, a seventy-year-old white farmer admitted to the University Hospital on November 3, 1941, with a diagnosis of strangulated right scrotal hernia, has been previously reported by Levin and Bethell.[3] He appeared acutely ill. Admission blood studies revealed a hemoglobin of 98 per cent and a leukocyte count of 9,750 per cubic millimeter. No differential count was done at this time. On the day of admission, he was operated upon and 56 cm. of nonviable ileum were removed. The postoperative course was stormy and on the seventh postoperative day, because of fever and the clinical and roentgenological evidence of pulmonary consolidation in the right lower lobe, sulfadiazine therapy was begun. During the ensuing nineteen days, he received 72 grams of sulfadiazine orally following an initial administration of five grams of sodium sulfadiazine intravenously. On the nineteenth day of drug therapy the leukocyte count was found to be 1500 per cubic millimeter with 10 per cent polymorphonuclear cells. The sulfadiazine was discontinued and 60 c.c. of pentnucleotide was administered during the next forty-eight hours. A 250 c.c. transfusion was given but despite the treatment, pulmonary edema developed on the twenty-first day following the initial dose of the drug (twenty-eighth day of hospitalization) and he died shortly thereafter. Permission for autopsy was granted and the pathological examination confirmed the diagnosis of agranulocytosis secondary to sulfadiazine therapy.

Discussion

Of the three cases presented, Cases 1 and 3 were indisputably caused by the chemotherapeutic agent. It seems most likely that Case 2 also

represents another example of the toxic action of sulfadiazine although, unfortunately, no blood studies were made prior to using the drug.

In our patients, as well as in the case reported by Curry[1] the agranulocytosis appeared after sulfadiazine had been administered for a prolonged period of time. The total amount ingested was in excess of 70 grams in each case. It is interesting to note that the daily dosage of one patient was only 2 grams. Apparently small daily doses do not eliminate the danger of agranulocytosis. In none of our patients was there a history of previous sulfonamide therapy.

The usual therapeutic measures for agranulocytosis, namely, repeated small transfusions, pentnucleotide, and, in one case, yellow bone marrow extract, had no favorable effect on the course of the illness.

Although a series of three cases is entirely too small to permit far-reaching conclusions, it would appear that prolonged administration of even small doses of sulfadiazine may be dangerous. It is conceivable that an occasional patient may develop an idiosyncrasy toward the drug during prolonged therapy which interferes profoundly with normal granulocyte development in the bone marrow. The authors urge that frequent observations of the total leukocyte count and the differential formula be made whenever sulfadiazine is used for more than a two-week period, even though given in small daily doses, and whenever the total dosage exceeds 25 or 30 grams.

Possible Relation of Vitamin Deficiencies to the Syndrome

Certain important and unanswered questions concerning the etiology of agranulocytosis have been apparent since the classical description of this disease was published in 1922 by Werner Schultz. One of the most important is the relation of certain drugs to the etiology of this condition. Although one of these, amidopyrine, was introduced into medicine in Germany in 1897 and in the United States a few years later, it appears singular that it was not responsible for the syndrome of agranulocytosis for a considerable period of years after it was first prescribed. Furthermore, the question may be asked, why did this syndrome appear rather suddenly twenty years ago, and subsequently be found to result from such diverse therapeutic agents as amidopyrine, gold, dinitrophenol, and the sulphonamide drugs? One possible explanation which occurs to the authors is that a widespread "conditioning mechanism" may have been produced in a certain proportion of the population of this and other countries which has rendered it susceptible to the action of certain drugs. A clue to this perplexing etiologic riddle is the apparent increase in vitamin deficiencies, especially those due to a decreased intake of the B complex which has been attributed to the changing dietary habits, especially of the American people. It is of interest that one of the patients herein reported (Case 1) had definite evidence of pellagra necessitating treatment, and that another (Case 2) had experienced a loss of 25 pounds of body weight as a result of an antiobesity diet, a short time before the onset of the present illness. No statements are available regarding the dietary history of the third patient, a seventy-year-old man. It should be emphasized, however, that older persons frequently have a poor appetite and commonly have mild dietary deficiencies. In addition, this patient undoubtedly had a very much restricted food intake during the 28-day "stormy" postoperative period when the syndrome of agranulocytosis developed.

This theory, namely, that a vitamin deficiency acts as a "conditioning mechanism" rendering persons more susceptible to certain drugs, may explain some of the unusual aspects of the etiology of agranulocytosis. It is a plausible interpretation of the occurrence of agranulocytosis as a "new" syndrome because there is evidence which indicates that at least mild degrees of vitamin deficiency are more prevalent now than previously. Furthermore, it offers a logical explanation of why some persons are sensitive to certain drugs causing this syndrome, and others are not. Some corroborative experimental evidence is available which lends support to this suggestion in the work of Day and his associates. In 1940[2] they reported that a leukopenia as low as 700 cells per cubic millimeter occurred in monkeys when they were fed the Goldberger black-tongue producing diet.

This possible etiological relationship is suggested in the hope that more patients who develop the syndrome of agranulocytosis will be studied from the standpoint of vitamin deficiencies. By the collection of reliable clinical data,

it should be possible to settle definitely the relation, if any, of vitamin deficiencies to the etiology of the disease.

Summary

1. Three cases of fatal agranulocytosis consequent to sulfadiazine therapy are presented.

2. In each case, the course of therapy was prolonged and the total amount of the drug ingested relatively large although in one case the daily dose was only 2 grams.

3. Frequent blood examinations with especial attention to the polymorphonuclear leukocytes are essential for the safe administration of this chemotherapeutic agent.

4. A theory suggesting the possible relationship of a vitamin deficiency to the etiology is presented briefly.

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MSMS

NEW FLYING AMBULANCES

The first high speed flying ambulances for navy and marine corps use are either on their way across the sea or have reached combat zones. The plane is a small transport which will carry two wounded men in wire stretchers and a crew consisting of pilot, co-pilot and nurse, and can operate from bases as far as 200 miles from battle zones.

The new ship was christened on Navy Day, October 27, in honor of Florence Nightingale, the first war nurse and the inspirer of International Red Cross. Manufactured by the Howard Aircraft Corporation of Chicago and St. Charles, Illinois, it will be known as the Howard-Nightingale. The name Nightingale will be protected by trade marks and copyright laws in the same manner as the terms Flying Fortress, Liberator, Thunderbolt and others applying to war planes.

Sister Elizabeth Kenny was the sponsor and was profuse in her praise of this emergency plane.

The kindest and most effective way of treating fractured ribs is by using a belt made of canvas and patterned like a brassiere.

* * *

Ununited fractures of the scaphoid are a common cause of pain in the base of the thumb.

* * *

A tourniquet should not be used when amputating for diabetic gangrene.

* * *

Never remove a fractured radial head in a growing child.

—Eugene W. Secord, M.D., Detroit.

Infections of the Heart*

By Russell F. Weyher, M.D.
Detroit, Michigan



M.D., Wayne University Medical College, 1921. Assistant Resident Physician, Long Island Hospital, 1923. Post Graduate Studies, Vienna, 1931. Associate in Medicine, Providence Hospital, 1940. Fellow American Medical Association.

Cardiac infections are classified into six groups; the four commoner types being illustrated with histories, serial teleroentgenographic tracings, and progress notes.

In discussing newer methods of treating acute and scubacute bacterial endocarditis, the distinction between the streptococcus viridans infection and other types is emphasized.

The highlights in prophylaxis, diagnosis, and therapy are summarized, and the paper concludes by pointing out that certain cardiac infections offer a better prognosis; if associated dietary deficiencies, especially of the B complex, are corrected.

■ Since the beginnings of perception Man has been more conscious of his heart than of any other of his invisible body parts.

His heart has been considered to be the seat of all his emotions, in contradistinction to his mind. In fact, the conflict between these two entities is today the cause of an enormous amount of serious and romantic cerebration.

A great civilization, the Aztecs, used the living heart from a suitable subject as their greatest object of sacrifice. Cannibals ate it in order to absorb the strength and courage of their enemies. One form of modern religion intimately associates its image with that of the Deity.

The layman is frequently terror stricken if he thinks he has "strained his heart," but ignores overtaxing every other part of his anatomy, including his brain. At present, so-called "soldier's heart" may be a difficult diagnostic problem at medical induction centers and in combat service.

The heart is probably more nearly perfect as a mechanism involved in the process called Life than any other that we can conceive. Although it is less than one-half of 1 per cent of the total body weight, it utilizes thousands of foot pounds of energy daily. It is the first sign of embryonic

*Read at the June, 1942, meeting of the Wayne County Medical Society, Detroit.

life visible to the naked eye; and of our three vital functions—cerebration, respiration and cardiac pulsation, the heart may continue to work minutes or hours after death has stopped the other two.

In modern mathematical parlance, and considering man's life span as three score years and ten, the average human heart beats 25,460,000,000 times from its first embryonic pulsation, to its last fibrillary twitch. This sum, like our national budget, is only roughly approximated.

Anatomically, infections of the heart may commonly involve the valves, the muscle, the pericardium, the vascular coats of the coronary arteries, and combinations of any of these structures.

Embolic infections of the neuromuscular mechanism, and actual intracardiac abscesses, either post traumatic or hematogenous, are much less frequently described.

It is important to remember that all congenital anomalies with resulting eddies in the intracardiac blood currents, make excellent areas for the implantation of infections.

Patients with cardiac infections will show poor therapeutic response if an associated subvitaminosis is overlooked, or insufficiently corrected.[23]

Etiologically, cardiac infections are herewith classified into six groups, in the order of their relative frequency and importance. The discussion of Groups V[13] and VI; and the disorders associated with diphtheria and thyroid toxins; typhus, yellow fever, and other controversial pathologic entities, is omitted because of time limitation.

Common

I Rheumatic
II Subacute bacterial
III Luetic

Rare

IV Acute bacterial
V Fungoid, due to Monilia
VI Parasitic, due to Echinococcus.

Rheumatic Infection

The late Dr. John L. Chester of Detroit,[8] and many others, believed that the acute rheumatic episode causes heart infection in up to 100 per cent of all cases. It is not so well known that chronic rheumatoid arthritis also produces heart disease. Baggenstos and Rosenberg autopsied twenty-five cases, finding true rheumatic infection in the myocardium, endocardium, or pericardium in 56 per cent.[1]

Clinically, a young white woman in her early twenties who has a serious organic heart disturbance may be presumed to have rheumatic endocarditis, until proven otherwise. If she has involvement of the mitral valve alone, her prognosis as to length of life is better than if the aortic or pulmonic valves are involved; since the aortic structure is prone to calcareous narrowing. The tricuspid is rarely involved.

Autopsy records of large New England hospitals show rheumatic valvular heart disease to be many times as frequent there as in the southern states. The rheumatic attack is most apt to develop during the winter and spring months.

Since there is a distinct relationship between upper respiratory and pharyngeal infections, and activation of the rheumatic process, Colburn and Moore[9] gave sulfanilamide prophylactically to 184 children for nine winter and spring months, reducing the incidence of streptoccus throat to 3 per cent, and rheumatic fever to one case, in contrast to the untreated children, of whom 50 per cent had sore throats, and a much higher incidence of rheumatic fever developed. Doses depended on the age of each child, and periodic blood counts were made.

The controversy over salicylates therapy may be lessened by admitting that their exhibition improves all exudative phases of rheumatism, that is: joint swelling, pain, fever and pericardial effusions,[4] but probably has no action on the proliferative phase which causes the valvular damage.[24] Rheumatic heart disease constitutes 40 per cent of all types of heart infections.[12] Digitalis, obesity reduction and prolonged rest are the mainstays of present therapy in this group.

Negroes seem to have some resistance to the disease.[22] It is more prevalent in the winter months, in both the U.S. and England. Of 542 autopsies at Providence Hospital in Detroit during 1940 and 1941, 6½ per cent showed rheumatic cardiac lesions; or, out of eighty-four cases of acquired fatal heart disease 41 per cent showed rheumatic lesions at autopsy.

The rheumatic patient's life story may be divided into three chapters. His initial bout in youth of acute fever, swollen joints and prostration is the first chapter or nidus, for the second chapter, in adult life, of subjective effort dyspnea and chest pain—with objective bruits, thrills, en-

largement, mitral facies, and anatomic valvular deformitis; myocardial hypertrophy, and Aschoff bodies. The third or final chapter shows the eventual progressive systemic evidences of heart failure.

The case summary, illustrative of this group, which will follow, points out two things: (1) that chapter one may be missing in the history, and (2) that the third chapter may be rewritten in order to give the patient at least a temporary new lease on life.

Subacute Bacterial Endocarditis

Since this is a specific disease, the term "Endocarditis Lenta" would avoid the present confusion in the literature. Incidentally, the recent literature is teeming with articles on therapeutic research in this field.

Endocarditis lenta always develops in previously deformed valves, and is due solely to the nonhemolytic Streptococcus viridans. It may attack any age, is most common in males from twenty to twenty-nine, but under twenty females are more commonly affected.

The diagnosis is based upon a cardiac murmur, low grade fever, sweats, enlarged spleen, urinary red blood cells, petechiæ, and repeated blood cultures showing the Streptococcus viridans, with a fatal outcome, in about 99 per cent of the cases.[24]

Therapy.—So far, the sulfonamides alone have proven to be generally disappointing.[10] Heparin plus sulfonamides, according to White, can reduce the temperature to normal and produce sterile blood cultures for a variable time. Most of his cases have not been followed very long. Other investigators question his results. The danger of massive embolism is very great, since the heparin may cause solution and breaking off of vegetations.

The most promising results have occured with sulfapyridine and fever therapy,[2,20] and recently an apparent cure followed 40 gm. of intravenous sodium sulfadiazine[10]; although other sulfonamides have been used when sulfapyridine was not tolerated.[11] Recently in a series of 21 patients so treated, Lichtman & Bierman[15] reported a 25 per cent recovery rate. Intravenous typhoid vaccine is more favored than mechanical hyperthermia. Osgood[16] believes that neoarsphenamine combined with sulfonamides will destroy most strains of Streptococcus viridans. White[24] states that recent therapy offers a 5 to 10 per cent chance of recovery.

The example to be described, emphasizes the danger of surgical removal of so-called infected foci in any case of inflammatory heart disease.[19]

Cardiovascular Syphilis

Cardiac lues has been placed third, in this discussion, because modern antiluetic therapy will undoubtedly decrease its incidence and consequently its clinical importance.

In addition to the usual involvement of the aortic valve, the openings of the coronary arteries, and the wall of the aorta; a diffuse luetic myocarditis, or a localized gumma may rarely occur.[14]

In the diagnosis, the chest x-ray may be more conclusive than the blood serology, which has been negative in about 50 per cent of the cases at Detroit Receiving Hospital who had had previous irregular treatment.

Early luetic aneurysm may be asymptomatic and not detectable by expert clinical examination during the period when therapeutic results are most promising. It is obvious that the luetic cardiac patient has a right to properly adjusted vigorous treatment, unless heart failure is actually present when first examined. The illustrative case, to be described, shows that too grave a prognosis should not be given the advanced case of cardiovascular syphilis, and also that failure to persist in treating the case may lead to an early catastrophy.

Roesler[17] illustrates specific cardiac and aortic changes in a 47-year-old male with negative serology.

Blakemore and King[3] describe an electrothermic coagulation by means of a conductive wire pushed into the aneurysmal sacs of twenty-eight patients with very good results, in their hands. Incidentally, cardiac syphilis is more often associated with vegetative endocarditis than is commonly recognized.[5,6,18]

Acute Bacterial Endocarditis

This is a fulminating disease with a fatal outcome the rule, difficult to diagnose, and lasting a few days to a few weeks. Because of the associated systemic infection, its diagnosis may be first made at the autopsy table.[14] Etiologically, hemolytic streptococci, pneumococci, staphylococci, gonococci, and influenza bacilli are listed by

Levine.[14] The recent literature also lists diphtheria bacillæ, tubercle bacillæ, and monilia.[7] Normal heart valves may be attacked.

Authors who report any recoveries admit their diagnoses open to criticism. For example, the finding of gonococci, or influenza bacilli in blood cultures from patients with clinical signs of heart disease might be coincidental. Moreover, in those patients who die after a few days, positive blood cultures, which are admittedly difficult to grow and identify, may never be obtained.

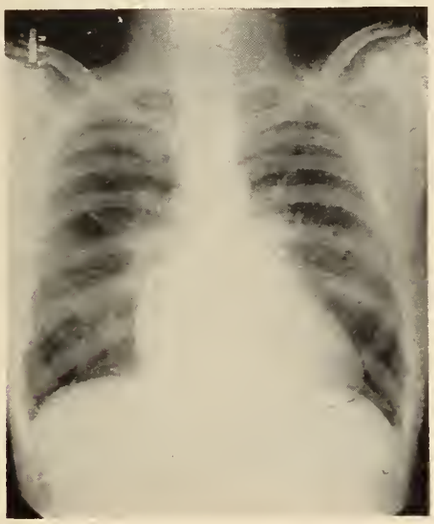


Fig. 1, Case 1.

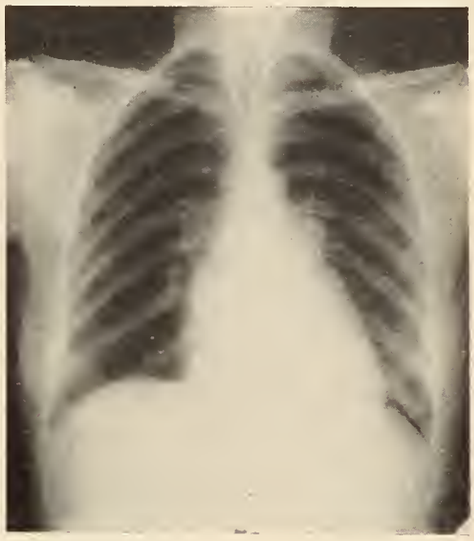


Fig. 2, Case 2.

In the example which will follow, who was treated by Osgood's method, the whole basis of treatment was to sterilize the blood stream rapidly and continuously, making successful blood cultures theoretically impossible, as soon as therapy was instituted.

The following case histories are cited in order to clarify each of four groups previously discussed.

Case Reports

Rheumatic Mitral Stenosis

Case 1.—E. P., white, male, aged thirty-seven, single. This patient had scarlet fever in infancy and frequent sore throats. No history of rheumatic fever, swollen joints or growing pains. Diet: Moderate steady drinker, doesn't bother with vegetables, little raw fruit, much starch. Streptococcus pneumonia one month before first examination on *November 17, 1940.* Examination showed auricular fibrillation. Treatment: digitalis and bed rest. *One month later* no complaints. Temperature normal. Pulse 64. Typical pre-systolic stenotic murmur. *June 3, 1941,* hemoptysis, orthopnea cyanosis, sore throat. Red blood count 3.2 millions. Liver three fingerbreadths below rib margin. Edema both ankles, râles both lung bases. Pulse 120-136, irregular. Apex in ant. axillary line. Hospitalized. Therapy-morphine pro re nata intravenous glucose. Heat to liver. Sulfathiazole. Crude liver extract 2 c.c. daily. Thiamin 1 mgm. qid. June 27 (two weeks later) discharged, home; pulse 72, irregular. Continued digitalis but stopped all other medicine for six months. *December 10, 1941,* again fibrillating, weight 158, electrocardiogram showed "auricular fibrillation and partial heart block." Thiamin intramuscularly, liver and yeast orally. *January 16, 1942,* gained 12 pounds. Cardiac murmur unchanged. Pulse 68—no complaints. Rbc—4.4 millions. Said—"since taking injections, felt stronger, heart didn't jump so much." He is now working in factory eight hours, seven days weekly, and shows no sign of decompensation. (Re-examined February 10, 1943—working steadily, taking decompensation). This initial teleroentgenogram has shown no variation in cardiac size in two years. (See Figure 1.)

Endocarditis Lenta

Case 2.—This forty-seven-year-old single, white woman had scarlet fever at sixteen. A sister had chorea simultaneously. Her mother died of valvular heart disease at forty-five.

At twenty-six she was informed that she had a "heart leakage," but did all the housework for a family of seven, later doing social service, which required walking two to three miles daily, up to her tonsillectomy in August, 1930. On September 20, one month later, she showed fatigue, dyspnea and pretibial edema. Examination and an electrocardiogram showed auricular fibrillation. Twelve days later she had a pulmonary embolus. With bed rest, and digitalis, she showed occasional temperatures of 99 to 100.4°. Resumed work in January, 1931. In May petechiæ on legs, and under fingernail beds. Three months later vacationed to Europe. Developed left transient cerebral hemiplegia in Heidelberg. Hospitalized three weeks, resumed travel, died on return voyage four days after a right hemiplegia with aphonia and terminal fever of 109. Apparently the tonsillectomy was followed by the onset of a Streptococcus viridans infection superimposed on an old mitral stenosis.

The teleroentgenogram, with serial tracings, shows the serial variations in cardiac size. Relatively small changes in outline indicate actually more marked differences in the heart volume since it is a spherical organ. (See Figures 2 and 3.)

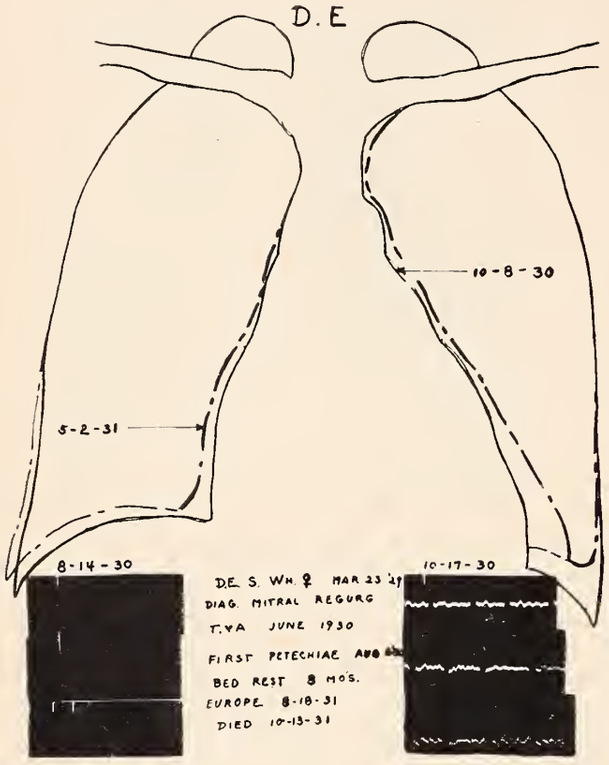


Fig. 3, Case 2.

Luetic Aneurysm

Case 3.—C. G., aged fifty-one, white, male, divorced, one child. Gonorrhea and a penile sore twenty-five years ago. First seen September 2, 1927, with agonizing chest pain, not much relieved with ½ gr. morphine, orthopnea, but no cough. Wassermann test showed 4 plus. *After one month* of therapy, aphonia developed with no signs of laryngitis nor upper respiratory infection. "Now able to lie down, no pain." Two months later voice returned, slight hoarseness. June 15, 1928, heart size smaller, aneurysm same. From September 2, 1927, through February 2, 1934 (six and one-half years), had twenty-six treatments neoarsphenamine (14 gm.), eighty-three treatments bismuth (11.6 gm.) 39 gm. sodium iodide and 7 gm. of mercury. Neglected therapy for seven months on July 23, 1934, while lifting a basket of heavy stones, developed agonizing chest pain. To hospital next day. Diagnosis (by another physician) "acute fall-bladder obstruction," prepared for surgery next morning. At 3:00 A.M. coughed up bright red blood, vomited, clutched his chest, fell back dead. Autopsy showed rupture of aneurysm into esophagus, the stomach containing about 1500 c.c. of blood. The temporary aphonia was considered due to shortening of the aortic arch, as a result of the specific therapy given, with traction on the left recurrent laryngeal nerve. It was deemed necessary in this case to give vigorous therapy early. This arrested the aneurysmal stretching for several years. The average length of life of aneurysmo of this degree has been sixteen to twenty-four months. (See Figures 4 and 5.)

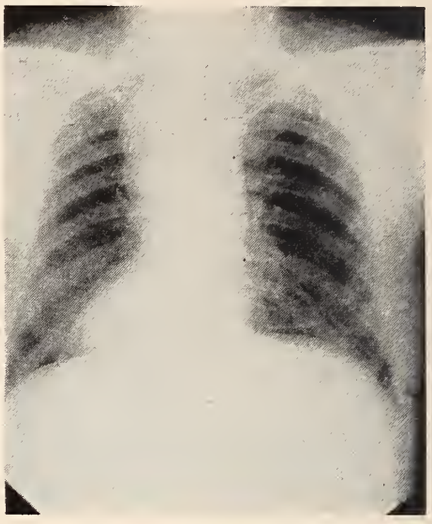


Fig. 4, Case 3.

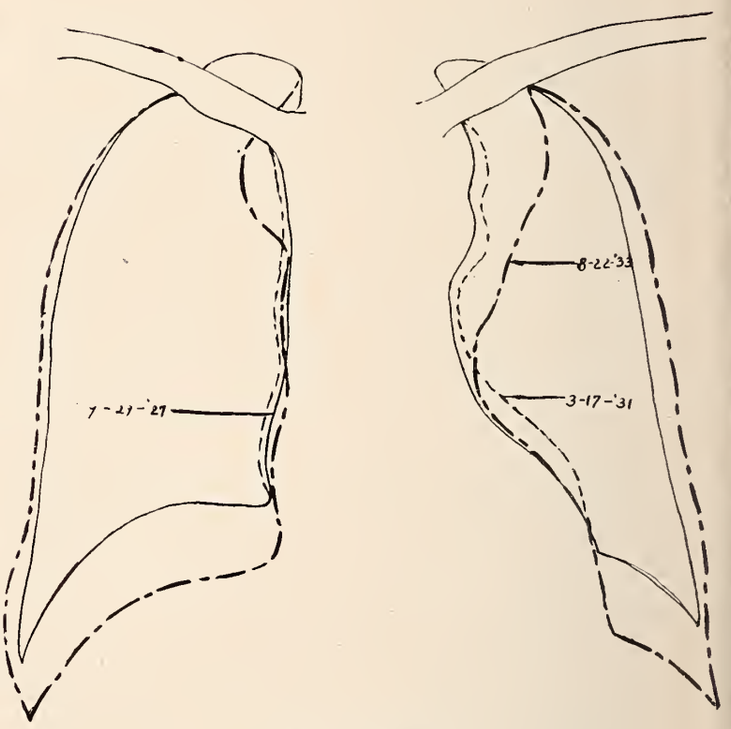


Fig. 5, Case 3.

Possible Acute Influenzal Endocarditis

Case 4.—C. K. was first seen November 1, 1940, with recurrent hemoptysis and orthopnea for one year. Pneumonia in childhood. Never had chorea, rheumatism, nor streptococcic throat. Diet: Worked in beer garden, drinks "'mostly beer, whiskey and highballs." While at work, couldn't go out to eat so consumed coffee, rolls and sandwiches, smokes twenty-five cigarettes daily. Examination—mitral flush on cheeks, teeth carious, gums swollen, tongue thickened and a beefy red, pap-

illæ hypertrophied. Blowing systolic at apex and base, heart enlarged. *September 30, 1941* (ten months later) had been in bed with fever, chills, marked night sweats, cough, slight sore throat for two weeks. Two previous physicians diagnosed "influenza." Last night delirium,

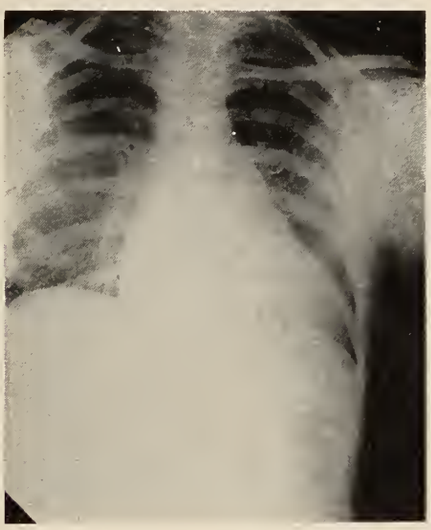


Fig. 6, Case 4.

then unconsciousness. Next morning 11:00 A.M. deep coma. Cheyne Stokes respiration six to eight per minute, pin point pupils, blood pressure 70/20, right flaccid hemiphegia. Heart rate 100-150, weak, pulse imperceptible. To hospital. Oxygen, coramine, intravenous glucose. Next day still alive. Osgood's therapy started, i.e., neoarsphenamine .2 gm. every four hours round the clock, to get a blood concentration of about 1/150,000 continuously, followed by sulfadiazine 5 gms., then 1 gm. every four hours, also coramine intravenously and orally every two to four hours. One blood culture before, and five after treatment were started, all negative, but petechiæ seen in left eyelid and conjunctivæ. The white blood count initially was 19,450, 89 per cent neutrophiles, dropped to 12,800, 74 per cent neutrophiles on the day he went home, *three weeks later,* with prescription for thiamin, yeast, liver extract and digitalis. Came to office *December 4, 1941,* afebrile, still aphonic, right lower arm paralyzed but can walk. Heart regular, a grating pre-systolic. Electrocardiogram — "premature beats, dropped ventricular complexes," with diagnosis "auricular fibrillation and a generalized undetermined vascular disturbance." *February 1, 1943*—blood pressure 110/74, no edema, heart; pre-systolic rumble, temperature 98.2; pulse—80. Right lower arm and speech still paralyzed.

Two months later this patient had a Jacksonian epileptic seizure but heart sounds were unchanged and he was afebrile. The hospital chart shows prompt temperature control after treatment was given. (In January, 1943, he still could not talk nor move his right forearm. There had been no recurrence of pêtechiæ nor fever). (See Figures 6 and 7.)

Summary

Group I. Rheumatic etiological agent unknown. Progressive valvular deformities inevitable. Therapy: prolonged rest, salicylates. Sulfonamides ineffective therapeutically but of prophylactic value.

Group II. Endocarditis lenta. Find streptococcus viridans early. Attacks damaged valves. Therapy: Try

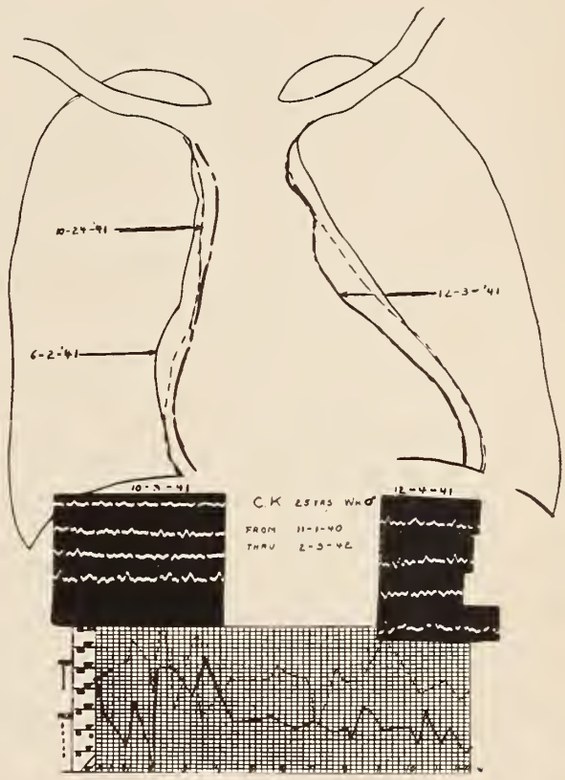


Fig. 7, Case 4.

massive intravenous sulfonamides or sulfapyridine plus hyperpyrexia Heparin hazardous.

Group III. Cardiovacular syphilis. Chest x-ray discovers early involvement. Therapy: For the duration of the patient's life. Sudden exertion may equal sudden death.

Group IV. Acute bacterial. Classify the organism. Frequently fulminating. Therapy: try continuous intensive blood sterilization.

Conclusions

Heart infections have been classified into six groups, rheumatic, endocarditis lenta, and luetic which are relatively common; and acute bacterial, fungoid, and parasitic which are relatively rare. An attempt is made to clarify the bacterial types by means of brief case histories and serial teleroentgenographic tracings. In spite of widespread research and new methods of therapy, the individual with Streptococcus viridans endocarditis is still usually doomed.

Continuous intensive chemical blood sterilization may save some of the other acute bacterial types.

In two of the cases who had poor dietary habits, B complex administration by multiple routes in addition to other cardiac treatment was, in the writer's opinion, beneficial.

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MSMS

CAUDAL ANESTHESIA

Caudal anesthesia has been a popular procedure in rectal and perineal surgery for many years. Our experience with this type of anesthesia began twenty-one years ago and comprises some 3,500 cases. The technique is that of Louis Hirshman, as demonstrated in Detroit in 1921, using a single injection of novocaine.

1. Caudal anesthesia in the practice of proctology is an ideal type anesthesia.

2. A series of 3,500 cases is reported with very rare failure, no deaths, no resultant nerve damages or infection.

3. A reasonable knowledge of the drugs and the sacral anatomy, along with a period of training, should be acquired before caudal anesthesia is attempted.—Moon and Christensen, *Nebr. State Med. Jour.*, December, 1943.

The Anti-Coagulants—Heparin and Dicumarol*

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This communication presents the results of four years' experience with heparin and the new drug dicumarol in the treatment of thrombo-embolic disease. The mode of action of the two substances is different, hence there are different indications and methods of administration. The anti-coagulants are of value in prophylaxis against pulmonary embolism. These are useful in arterial surgery, phlebitis, mesenteric thrombosis and other conditions in which it is desirable to inhibit intravascular clotting.

■ Methods of control of intravascular clotting of blood have been eagerly sought by surgeons, cardiologists and others who treat the various pathologic manifestations of thrombosis and infarction. When purified heparin became generally available about five years ago, it was evident that a great step had been taken. The coagulability of the circulating blood could now be inhibited rapidly, safely and with considerable certainty. Two objections to heparin therapy were present; it was costly and the procedure of administration, either by continuous intravenous drip or frequent intermittent injections was troublesome. Heparin is cheaper now, but no easier methods of giving it have been forthcoming. The newer anticoagulant drug dicumarol, 3,3'-methylene-bis-(4-hydroxycoumarin), being given orally in the form of several capsules daily, possesses neither of these disadvantages. In this paper, I shall discuss the present status of our knowledge of the mode of action of these two anticoagulants and shall present the results of their use in the treatment of 89 patients with thrombo-embolic disease.

The commonly accepted explanation of the co-

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Read before the Genessee County Medical Society, Flint, Mich., March 23, 1943.

agulation of blood, as recently stated by Howell,[6] will be reviewed briefly. Normally, the circulating blood contains prothrombin, calcium, and fibrinogen. When thromboplastin is added, prothrombin is converted to thrombin which acts on the fibrinogen to change it to fibrin. The role of the platelets is omitted for simplicity. Both of the anticoagulants apparently act on the prothrombin, but in different ways. Dicumarol seems to prevent the formation of new prothrombin, but does not neutralize that which is already in the blood stream. Heparin does not interfere with the manufacture of prothrombin, but in some way, it prevents the conversion of the prothrombin in the circulating blood to thrombin.

To illustrate the above reactions, as well as other factors in the maintenance of the prothrombin level of the blood, I gave the ideas to a cartoonist who turned out the sketch shown in Figure 1. In the schema, it is indicated that vitamin K is necessary for the manufacture of prothrombin and it is not absorbed in the absence of bile salts, hence the hemorrhagic tendency in obstructive jaundice. Prothrombin appears to be manufactured in the liver, therefore severe cirrhosis and hepatitis are accompanied by reduction of the prothrombin level. Dicumarol seems to "stop the machinery" temporarily without damage to the other functions of the liver. The diagram illustrates why the administration of dicumarol does not result in an immediate effect on the clotting mechanism; about two days must pass before the supply of prothrombin on hand is used up. On the other hand, heparin acts immediately on the whole preformed supply, inactivating it for two to three hours when a single dose is administered.

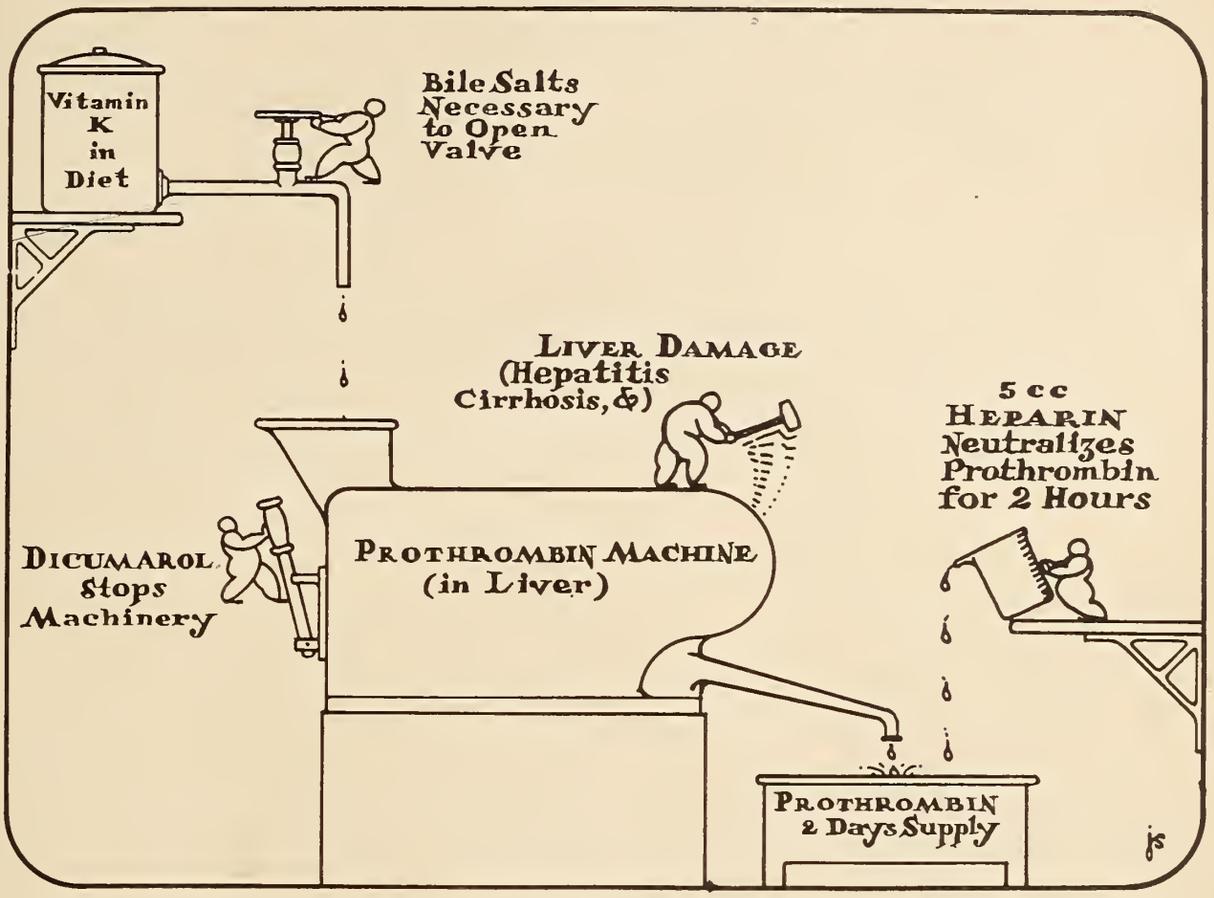


Fig. 1. Sketch illustrating the current views of the effect of vitamin K, bile, liver disease, dicumarol and heparin on the prothrombin level. (Courtesy, Mr. James Slimmon.)

If one wished to inhibit clotting for a period of ten days for example, the economical way to do it would be to stop the formation of new prothrombin by an immediate dose of dicumarol, with follow-up doses to prevent resumption of manufacture, and to neutralize that on hand by giving heparin by continuous drip for two days.

The above conception of the modes of action of heparin and dicumarol is based on published experimental work. The bibliography on the action of heparin is too large to be mentioned here.

The reader is referred to the reviews by Prandoni and Wright,[15] Mason,[13] D'Alessandro[5] and the monograph by Jorpes.[7] With regard to dicumarol, the investigations of the group at the University of Wisconsin, Bingham, Meyer and Pohle,[2] and the group at the Mayo Clinic, Bollman and Preston,[3] are especially significant.

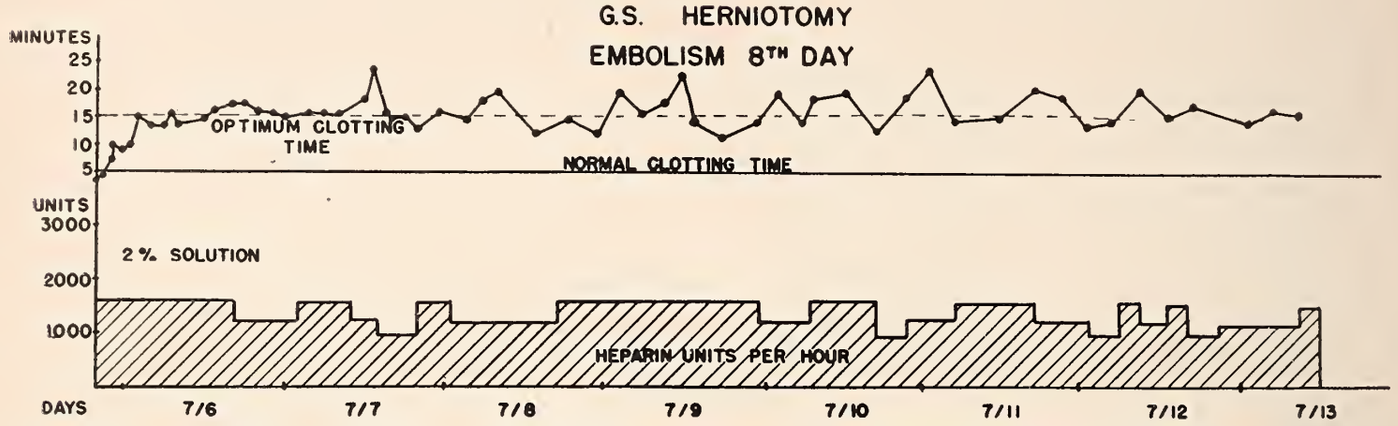


Fig. 2. Ideal heparin response. This patient was given approximately 1 c.c. (1000 Toronto units, 10 mg.) of heparin per hour, with a fairly constant elevation of the clotting time to the arbitrarily adopted optimum level of fifteen minutes. (Courtesy, *Annals of Surgery*)

A few facts concerning the discovery of dicumarol will be stated. In 1921, Schofield[17] of Canada found that hemorrhagic disease of cattle was due to the eating of spoiled sweet clover. Roderick[16] in this country made the same observation independently. Link and his associates[18] at the University of Wisconsin isolated and synthesized the active hemorrhagic agent, and found that it was a dicoumarin, 3,3'-methylene-bis-(4-hydroxycoumarin). The term dicumarol is now used to represent this particular dicoumarin, of which there are more than forty which have an effect on the prothrombin.

Dicumarol has received considerable clinical trial, but at the time of the writing of this paper, the drug is available from the pharmaceutical firms on an investigative basis only. The largest reported series of cases are as follows:

Meyer, Bingham and Axelrod[14]	73
Allen, Barker and Waugh[1]	374
Butsch and Stewart[4]	150
Wright and Prandoni[19]	40
Total	637

In the 637 cases listed above, there were only two deaths which could be attributed to dicumarol therapy, and these were in cases of subacute bacterial endocarditis. It will be recalled that similar fatal results were obtained when heparin was used in this type of case.[12]

Heparin has been used at the Henry Ford Hospital since 1939. It has been our practice to give it in two per cent solution by continuous intravenous drip into a vein in the back of the left hand or forearm (or the right hand if the patient is left-handed). The clotting time of the blood is tested at intervals, usually every hour, until an optimum clotting time of fifteen minutes (capillary tube method) is reached, after which it is tested three times daily. In the United States, two commercial preparations of heparin are available. They are of equal and satisfactory potency and are non-toxic, as shown by the lack of chills. These preparations are Liquaemin (Roche-Organon) and Solution of Heparin (Lederle). The heparin is dispensed in 10 c.c. vials containing 100 milligrams of the crystalline salt. This corresponds to 10,000 Toronto units.

Figure 2 shows an ideal response to the continuous administration of heparin to a patient who had had a non-fatal pulmonary embolism.

Between April 1, 1939, and Feb. 1, 1943, seventy-one patients in the Henry Ford Hospital were treated with heparin. The indications for treatment and results are shown in Table I.

Many of the above cases have been discussed in detail in previous papers.[9,11] The large group of fifty-six cases of pulmonary infarction is the most interesting. Most of them had had an operation. Fifty-three did not have a recurrence of embolism and are alive and well. Two of the fatal cases apparently had a second embolism while heparin was being given. This indicates that there is danger of more breaking off of the

TABLE I. PATIENTS TREATED WITH HEPARIN

Diagnosis	No. Cases	Deaths
Pulmonary infarction	56	3
Arterial embolectomy	2	0
Phlebitis	2	0
Mesenteric thrombosis	1	1
Ligation common carotid, hemiplegia	1	1
Septic thrombophlebitis	1	1
Arterial thrombosis, leg	1	0
Arterial occlusion, senile cases	5	5
	71	11

clot which was present before treatment was begun. The third fatal case died of his original large infarct. Autopsy showed a resolving infarct, marked myocarditis and thrombosis of the femoral vein.

The five patients listed in Table I as "arterial occlusion, senile cases" were aged patients with heart disease who had impending gangrene of a lower extremity. Exploration of the femoral artery was carried out in each, but extensive thrombosis was found, and the circulation was not established. Heparin was given in desperation, but was obviously without value. All of the patients subsequently died, with and without amputation.

A number of hemorrhagic complications were encountered, but no death could be attributed to this cause. Two patients had subcutaneous hematomas. Seven patients bled from operative wounds; they were treated by withdrawal of the heparin and transfusion. There were two cases of hemothorax which were alarming (reported by Keyes and Shaffer[8]). Hematuria and epistaxis have occurred rarely.

A small series of eighteen patients was treated with dicumarol. The indications and results are given in Table II.

The procedure for dicumarol administration is simple. Before beginning treatment, the prothrombin level is determined. If this is satisfactory, an initial dose of 100 mg. per 50 pounds of body weight is given. This should not exceed 400 mg. Since the drug is dispensed in 50 mg. capsules, no attempt is made to compute the dose closer than the nearest multiple of 50. The order for follow-up doses reads as follows: "Take

TABLE II. PATIENTS TREATED WITH DICUMAROL

Diagnosis	No. Cases	Deaths
Postoperative pulmonary infarct	11	0
Coronary occlusion, pulmonary infarct	3	0
Prophylactic, postoperative	3	0
Phlebitis	1	0
	18	0

TABLE III. PATIENT J.C. AMPUTATION RIGHT LEG, INFARCT, DICUMAROL TREATMENT

Date	Dose	Coagulation Time	Plasma Prothrombin	
11/19/42	—	2.5 min.	85%	
11/19/42	400 mg.	—	—	
11/20	100	3	—	
11/21	100	4	10%	
11/22	100	3.5	—	
11/23	100	4	10%	
11/24	100	4.5	—	
11/25	100	4.5	2%	
11/27	100	6	—	
11/28	100	5	—	
11/29	100	5	—	
11/30	100	—	1%	
12/1	100	—	—	
12/2	—	9	—	Hemorrhage from stump
12/3	—	—	55%	Transfusion
12/7	—	—	100%	

blood for plasma prothrombin at 8:00 A.M. daily. At 4:00 P.M. daily, give 100 mg. dicumarol unless the prothrombin determination of the morning is 10 per cent or below, in which case omit the dose."

In patient J. C. (Table III) a hemorrhagic complication developed which is probably attributable to failure to carry out the part of the above order relating to the omission of the daily dose of dicumarol when the prothrombin is below 10 per cent.

It will be seen in Table III that the coagulation time was not reliable as an index of the effect of the dicumarol. In spite of the dangerously low prothrombin (1 per cent) the daily dose was given, and finally there was hemorrhage from the stump, which necessitated transfusion.

Have any lives been saved by the use of the anticoagulants? To try to answer this question, I will give some of the figures recently gathered by Hooker and me.[10] We found that since 1924, there have been 187 cases of non-fatal infarction, and 65 cases of fatal embolism, a total of 252. Seventeen of the fatal cases had previous non-fatal episodes. Therefore, 17 is added to 187 to give 204 cases of non-fatal episodes. Sixty of these were treated with heparin or dicumarol (53 heparin, 7 dicumarol). This leaves 144 untreated cases. Seventeen of these went on and had a fatal embolism, a mortality of *11.8 per cent.* Of the sixty treated cases, two had a second and fatal embolism, giving a mortality rate of *3.3 per cent.*

These mortality rates should be compared with those from the Mayo Clinic,[12] where it has been found that 18.5 per cent of patients with a non-fatal postoperative pulmonary infarction subsequently have a fatal embolism. In sixty-seven such cases treated with dicumarol, there was not a single fatality, whereas thirteen deaths would have been expected without treatment!

Summary

1. The principles of anticoagulant therapy with heparin and dicumarol have been discussed.

2. The results from treating seventy-one patients with heparin and eighteen patients with dicumarol have been presented.

3. These anticoagulants appear to be of considerable value in the treatment of thrombo-embolic disease.

Acknowledgments: This study has been carried out with the encouragement of Dr. Roy D. McClure. The dicumarol was furnished for investigational purposes by the Eli Lilly Company and E. R. Squibb and Sons.

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MSMS

"ON THE RUN"

Upper dysphagia, or the Paterson syndrome, occurs in approximately 15 per cent of simple achlorhydric anemias so common in women between thirty and fifty. Successful treatment is accomplished by giving iron.

* * *

Fasting gastric contents more than 150 c.c. in volume, and high in free acid, signify peptic ulcer.

* * *

Initial local use of sulfonamides should be limited to avoid the danger of sensitization.

* * *

From observations made to date, it appears that prefrontal lobotomy is almost specific in the treatment of agitated depression.

* * *

In myocardial infarction it takes three months for a firm cicatrix to form, then the development of an adequate collateral circulation begins, which may take months and years.

* * *

When other diagnostic methods for recognizing peptic ulcer are unavailable the duplication of symptoms by instillation into the stomach of 200 c.c. of 3 per cent hydrochloric acid is highly significant. So also is the relief obtained by withdrawing this acid solution and substituting 200 c.c. of 2 per cent soda bicarb. solution.

—*Detroit Medical News,* Nov. 15, 1943.

Christmas

For years we have looked forward to December and the Christmas-tide with light hearts and in anticipation of the joy and good fellowship of the holiday season.

For centuries, Christmas bells have rung out the good tidings of "Peace on Earth and Good will to all Men." How different it is this year. Instead of peace, we have war; and instead of goodwill, there is hatred between nations.

Christmas of 1943 will have many heartaches and instead of the merry Yuletide spirit, in many homes there will be sadness and longing for those who, because of this World War, are scattered to the four corners of the earth, and for those who will never return. But, still in our hearts, we have hope. Hope, that as we enter a new year, we may see an early end to this war; and when this war is successfully won, in the pastwar days, we can establish an everlasting Peace on Earth and Goodwill between nations.

To our doctors at war, and to you, doctors, at home, I wish to extend the Season's Greeting, and for the New Year may you enjoy peace, good health, security and the opportunity to practice medicine in a democratic way without the interference of bureaucrats.

C. R. Keyport

President, Michigan State Medical Society

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President's



Page

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EDITORIAL

AN APPRECIATION

▪ The Council at its organization meeting in Detroit, September 23, 1943, extended a vote of appreciation to our members in the armed forces for their outstanding and unstinted services. We have Michigan doctors of medicine serving as medical officers in every field of action in the entire world, and we are proud of the record.

The army reports that deaths from wounds in this war have been reduced to about one-fifth of those of the last war. The navy approved an interview with Capt. Melville J. Aston, USN, chief surgeon of a hospital ship from Pacific combat areas, saying that only sixteen out of ten thousand patients died on the ship; 7,500 were wounded, and the others were medical cases. Captain Aston attributed the low loss to early treatment of the wounded with blood plasma, and the efficiency of the ship's staff of sixteen physicians and thirteen nurses.

During the first world war it was found that careful treatment promptly given reduced the death date by half. Some hospitals operating side by side demonstrated that. There is an abundance of doctors of medicine in service in this war, and they are especially well prepared for the services they may have to render. One advantage the medical officer has this time is a complete program of schooling, and of special training. Men have been sent to school whenever they could be better trained, or whenever they were soon to be detailed to some unusual task.

Efforts have been made to fit the men to the job they would have to do, and when especially trained men were not available textbooks have been prepared classifying the special knowledge needed and making it applicable to the abilities of the men who would have to do the work.

Every effort has been made by the medical officers in command of our various forces to pick the very best men for the positions of trust and service and responsibility. From the standpoint of caring for the wounded and sick of our fighting forces nothing has been left undone.

Planning for the future of medicine is a different story, and we are still unconvinced that the war program should have disrupted the whole teaching program to the extent it has. Britain and the other countries have not completely reorganized their whole medical educational program, but so far as possible have maintained the steady flow of students and of schooling, so that after the war is over they will not have to consider postwar planning. There will still be something to count upon for the steady advance of medical progress.

For what has been done to protect the lives and health of our boys in service we humbly thank the men who have given of their time and their hopes of success in the private practice of medicine. We who have served in the other war appreciate what their sacrifice has been. Speaking again from experience we wish to reassure our brothers serving with the flag, by reminding them that their stature will have grown, and their opportunities will have multiplied.

THE JOURNAL wishes to add its commendations to those of the Council for all our members in uniform.

GREETINGS

▪ THIS is the final number of THE JOURNAL for the year 1943, and offers an opportunity to wish all of our members a very Happy Christmastime, and to express our hopes and wishes for a new year bringing us peace and a measure of contentment, with the return of our friends and neighbors who are now fighting our battles.

ANOTHER DIRECTIVE

▪ ON another page will be found a special bulletin from the Bureau of Legal Medicine and Legislation of the American Medical Association regarding federal funds for the relocation of physicians. This is a measure now before Congress, and will be acted upon in the course of events in the passage of an appropriation bill. We will then have another sample of this too frequent form of securing vital legislation, recalling the

Children's Bureau maternity-infant care of recent memory.

This measure is ostensibly for the relocation of physicians in critical areas, and provides them $250 a month for three months, to get established, but as we read it there is authorization for "the Surgeon General to assign medical and dental personnel of the Public Health Service to areas found to be in critical need of additional medical and dental services," and the further directive that "such services to be furnished the public in accordance with schedules of fees approved by the State Health Departments, and the Surgeon General of the United States, which fees shall be collected by, and used at the direction of the State Departments of Health to defray the expenses thereof incident to the rendition of such medical and dental services, the balance at the end of the year to be turned into the Treasury as miscellaneous receipts."

In plain English that means that if the Wagner-Murray-Dingell Bill does not pass, but this appropriation does, the United States and the State Departments of Health will be in the practice of medicine, and they can make their competition so active and so acute as to put the private practitioner out of business. Of course this is only for critical areas, but what area would not be critical? and who would determine what area is critical? The State Departments of Health, of course!

What to do? It is not too soon to write to our Senators and Representatives in Washington and tell them how we feel. They are supposed to represent us and do as we (the people) wish. *We must also get busy among our friends and patients and get their active coöperation.* Medical men alone will not have power enough to protect the public against this radical socialistic reformation of the whole field of health. The public, more than we, are the ones who will suffer most from the deteriorated services they will ultimately get. It is their fight, but WE must tell them what is impending. Their eyes have been blinded by propaganda. They do not see the sinister portent behind the honeyed words.

The proponents of social reform have been active while we have been asleep. They have done many things to our beloved profession, including a Supreme Court decision which says we are not a profession. It does not take a seer or a prophet to see that we are now in a reformation as great as that of the dark ages. We should have a hand in determining what the outcome will be. The reformers are working all the time, and we are too busy taking care of the sick and the injured to take a second thought as to how we and our patients will be affected. Let us spend some of our treasured moments pondering these thoughts and doing something about it.

We believe action is immediately needed.

On the civilian front the social schemers are proposing legislation (Wagner-Murray-Dingell Bill) designed to cut the throat of the medical profession.—From the battle front comes a letter from Lt. Gen. Mark W. Clark, Commanding General of the Fifth Army, eulogizing the marvelous service rendered by the medical department in the invasion of Salerno Bay.—Apparently these proponents for handcuffing the medical profession were not with the Fifth Army in the invasion of Salerno.

It might be said that the failure of the medical profession to gain wholehearted support of the public and an intelligent press may be attributed, in part, to the reluctancy of many physicians to participate actively in civic affairs.—Does not direct contact with the public offer the most potent means of molding public opinion?—If it is not taken advantage of by individual physicians, who is to blame?—The truism that public officials determine to a large measure how the people's health shall be cared for and who shall do it brings the inevitable conclusion that doctors cannot fail to concern themselves with civic and political matters.—*Journal Missouri S. M. Assn.*, December, 1943.



PROCEEDINGS OF THE MSMS HOUSE OF DELEGATES—1943

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MICHIGAN STATE MEDICAL SOCIETY

Seventy-eighth Annual Session

PROCEEDINGS OF THE HOUSE OF DELEGATES

Statler Hotel, Detroit, Michigan

September 20, 21, 1943

Monday Evening Meeting

September 20, 1943

The first meeting of the Annual Session of the House of Delegates of the Michigan State Medical Society convened in the Ballroom of the Statler Hotel, Detroit, Michigan, at eight-twenty o'clock, P. L. Ledwidge, M.D., the Speaker, presiding.

THE SPEAKER: The House of Delegates will come to order.

Is the Chairman of the Credentials Committee ready to report?

J. J. O'MEARA, M.D. (Jackson): Mr. Chairman, I would like to announce that I have in my hands the credentials of 103 members out of a possible 114, 40 per cent of which are not from any one county.

I. Record of Attendance

	COUNTY	DELEGATE	MEETING 1st	2nd	3rd
1.	Allegan	H. H. Johnson	x	x	x
2.	Alpena-Alcona-Presque Isle	William E. Nesbitt	x	x	x
3.	Barry	C. A. E. Lund	Not Repres'd.		
4.	Bay-Arenac-Iosco	C. L. Hess	x	x	x
		Fred Drummond	x	x	x
5.	Berrien	D. W. Thorup	x	x	x
6.	Branch	Robert L. Wade	x	x	x
7.	Calhoun	A. T. Hafford	x	x	x
		C. S. Gorsline	x	x	x
8.	Cass	S. L. Loupee	x	x	x
9.	Chippewa-Mackinac	E. S. Rhind	x	x	x
10.	Clinton	W. B. McWilliams	x	x	x
11.	Delta-Schoolcraft	J. J. Walch	x	x	x
12.	Dickinson-Iron	W. H. Alexander	x	x	–
13.	Eaton	Don V. Hargrave	x	x	–
14.	Genesee	F. E. Reeder	x	x	x
		Henry Cook	x	x	x
		R. Scott	x	x	x
		D. R. Brasie	x	x	x
15.	Gogebic	W. E. Tew	Not Repres'd.		
16.	Grand Traverse-Leelanau-Benzie	Robt. Lossman	x	x	x
17.	Gratiot-Isabella-Clare	M. G. Becker	x	x	x
18.	Hillsdale	L. W. Day	x	x	x
19.	Houghton-Baraga-Keweenaw	Alfred LaBine	x	x	x
20.	Huron	C. W. Oakes	x	x	–
21.	Ingham	Robert Breakey	x	x	x
		C. F. DeVries	x	x	x
		L. G. Christian	x	x	x
22.	Ionia-Montcalm	W. L. Bird	x	x	x
23.	Jackson	J. J. O'Meara	x	x	x
		H. A. Brown	x	x	x
24.	Kalamazoo	L. W. Gerstner	x	x	x
		R. J. Armstrong	x	x	x
25.	Kent	A. V. Wenger	x	x	x
		C. F. Snapp	x	x	x
		R. H. Denham	x	x	x
		George Southwick	x	x	x
		Donald Chandler	x	x	x
26.	Lapeer	D. J. O'Brien	x	x	x
27.	Lenawee	E. T. Morden	x	x	x
28.	Livingston	Hollis L. Sigler	x	x	x
29.	Luce	Henry E. Perry	x	x	x
30.	Macomb	D. B. Wiley	x	x	x
31.	Manistee	E. A. Oakes	x	x	x
32.	Marquette-Alger	V. Vandeventer	x	x	x
33.	Mason	C. A. Paukstis	x	x	x
34.	Mecosta-Osceola-Lake	Thomas P. Treynor	x	x	x
35.	Medical Society of North Central Counties	Richard Peckham	x	x	x
36.	Menominee	H. T. Sethney	x	x	x
37.	Midland	Harold H. Gay	x	x	x
38.	Monroe	W. J. Gelhaus	x	x	x
39.	Muskegon	Ernest N. D'Alcorn	x	x	x
		Harold D. Dykhuisen	x	x	x
40.	Newaygo	H. R. Moore	x	x	–
41.	Northern Michigan	F. C. Mayne	x	x	x
42.	Oakland	Robert Baker	x	x	x
		Palmer Sutton	x	x	x
		Harold Roehm	x	x	x
43.	Oceana	Merle G. Wood	Not Repres'd		
44.	Ontonagon	W. F. Strong	x	x	–
45.	Ottawa	A. E. Stickley	x	x	x
46.	Saginaw	C. E. Toshach	x	x	x
		L. C. Harvie	x	x	x
47.	Sanilac	R. K. Hart	Not Repres'd.		
48.	Shiawassee		Not Repres'd.		
49.	St. Clair	George Waters	x	x	x
50.	St. Joseph	R. A. Springer	x	x	x
51.	Tuscola	R. R. Cook	x	x	x
52.	Van Buren	Wm. R. Young	x	x	x
53.	Washtenaw	Dean W. Myers	x	x	x
		Leo A. Knoll	x	–	x
		Mathew Soller	x	x	–
54.	Wayne	W. D. Barrett	x	x	x
		R. L. Novy	x	x	x
		J. M. Robb	x	x	x
		A. E. Catherwood	x	x	x
		C. D. Brooks	x	x	x
		R. C. Jamieson	x	x	x
		G. L. McClellan	x	x	x
		Wm. J. Stapleton	x	x	x
		W. B. Cooksey	x	x	x
		C. E. Simpson	x	x	x
		T. K. Gruber	x	x	x
		C. E. Dutchess	x	x	–
		Harry F. Dibble	x	x	x
		Henry A. Luce	x	x	x
		F. G. Buesser	x	–	x
		L. W. Hull	x	x	x
		L. J. Hirschman	x	x	–
		H. W. Plaggemeyer	x	x	–
		C. F. Brunk	x	x	x
		R. V. Walker	x	x	x
		D. C. Beaver	x	x	x
		J. H. Andries	x	–	x
		E. R. Witwer	x	x	x
		Earl G. Krieg	x	x	x
		W. B. Harm	x	x	x
		L. J. Morand	x	x	–
		S. W. Insley	x	x	x
		A. F. Jennings	x	x	x
		M. A. Darling	x	x	x
		Volney N. Butler	x	x	x
		Wm. S. Reveno	x	x	–
		Bruce H. Douglas	x	x	x
		L. J. Bailey	x	x	x
		Wm. N. Braley	x	x	x
		C. K. Hasley	x	x	x
		Wm. S. Gonne	x	x	x
		J. A. Kasper	x	x	–
		John H. Law	x	x	x
		Bruce C. Lockwood	x	–	x
		L. T. Henderson	x	x	x
		Wm. P. Chester	x	–	x
		B. L. Connelly	–	x	x
55.	Wexford-Missaukee	W. J. Smith	Not Repres'd.		
56.	Speaker	P. L. Ledwidge	x	x	x
57.	Secretary	L. Fernald Foster	x	x	x
58.	Immediate Past President	Henry R. Carstens in Military Service			

THE SPEAKER: If there is no objection, I will consider this a roll call and declare this session in order.

Next in order is the appointment of the Press Committee: Harry Dibble, M.D., Chairman; George Southwick, M.D., and L. Fernald Foster, M.D. We ask that the members of the press show their usual courtesy in not publishing anything that doesn't go through this committee.

The Reference Committees are as announced on page three.

On the Committee on Officers' Reports, Dr. R. K. Hart will be replaced by Dr. W. E. Nesbitt of Alpena.

On the Reference Committee on Standing Committees, Dr. J. J. Walch, who has been chairman, is ill. Dr. L. W. Day will act as chairman. Dr. H. R. Moore of Newaygo County will also go on that committee.

Then there are two or three announcements to be made.

All the Reference Committees will meet immediately after this meeting in rooms that have been assigned to them. As we have said before, the stenographer will remain in Parlor D to serve them in getting out their reports. She will not move from that room.

Then there is one announcement that has to do with the Michigan Medical Service. There are some members of the Board of Directors to be elected, eight in all. It is in the Constitution and By-Laws, that nominations may be made on petition of any ten members—that is, any ten delegates. So if you have individuals whom you would like to nominate for the Board of Directors of the Michigan Medical Service, please get your petitions in before tomorrow afternoon's meeting. That meeting, as you know, is called for two o'clock.

Next in the order of business is the Speaker's Address. I will ask Dr. Southwick, Vice Speaker, to take the chair, please.

(G. Howard Southwick, M.D., Vice Speaker, took the chair.)

THE VICE SPEAKER: Gentlemen, it has been reported that there is considerable work to be done at this session, and the outline of part of it will be given to you by the Speaker of the House. We now are privileged to listen to the Speaker's address. Dr. Ledwidge.

II. Speaker's Address

The private practitioner is losing his heritage; a heritage built on one hundred fifty years of splendid service to mankind and exceptional progress in the science of medicine; a heritage of individual initiative with each man inspired to do his best, secure in the knowledge that good work is bound to be rewarded; a heritage of leadership, by men whose interest in patient and colleague was not outweighed by selfishness or fear; a heritage of respect and affection of private patient for personal physician.

We're losing our heritage of traditional American Medicine, and what are we getting in its stead? A program of socialized medicine, a system of practice in which self-reliant enterprise is vitiated, and we will eventually be told, how many patients we may have, what treatment we may prescribe, and what we shall charge therefor; a leadership, devoid of courage, whose answer is, "Yes," to each succeeding demand for further governmental intrusion into practice; a membership a great many of whom are unable to see past a few paltry dollars of governmental subsidy into a dismal future for the practice of medicine; a public, saturated with propaganda, who look on us with suspicion rather than with confidence.

The instances of intrusion or attempted intrusion are many. I shall discuss but one, the program of obstetric-pediatric care for wives and infants of enlisted men, which is now being foisted upon us. No group on earth will deal more kindly or more generously with the wives and babies of our enlisted men than will the members of the Michigan State Medical Society. Their problems are our problems, and we as physicians understand them, perhaps better than anyone else. Those enlisted men are fighting for a principle, and so are we, the principle of American freedom; in this instance, the principle of American freedom as applied to the practice of medicine. We want them to have the comfort of knowing that their loved ones will get the best of medical care without financial hardship, but we are entitled to have something to say as to how that care shall be distributed.

Let's look at this program, this program whereby the Federal Government in Washington pays the Doctors of Medicine in Michigan for care of private patients without regard to their financial status. To begin with, it is based on two false premises. It has been stated in the public press that this program was developed in response to a demand from all over the country for this type of service. It is my opinion that this statement is not true, and that the plan originated in the Children's Bureau of the Department of Labor, Washington, D. C. It was financed by a deficiency appropriation and set up as an emergency measure when no emergency had been shown to exist. Since method of payment is the only radical departure the program offers, we must assume that the so-called emergency is a financial one. What is this financial emergency? Would it be a financial emergency, for example, if a daughter-in-law of the late Edsel Ford should give birth to another member of that great family? Or if Sonja Heinie, whose husband is now with the armed forces, should give up skating for motherhood? Have the wives or infants of any enlisted men been refused medical care for lack of funds? I doubt it. Such cases have not been cited. If such emergency should exist, there is no excuse for its existence. The United States has the money and the obligation, to pay its enlisted men sufficient income to amply provide their dependents with food, clothing, shelter, medical care, and other necessities. It is neither necessary nor just to single out medical care and to say to them, "we'll buy this for you, the rest you must get for yourselves."

The history of the obstetric-pediatric program in Michigan is as follows: At the July, 1942, meeting of the Council we were advised by the Michigan Department of Health, through Secretary Foster, that there was available for the asking a federal grant of $10,000 for the care of soldiers' families in Michigan. Recognizing this as an opening wedge, and realizing the futility of such a sum for such a purpose, the Council discouraged the proposal; and the federal grant was neither asked for nor received by the State Department of Health. March 18, 1943, the President signed Deficiency Appropriation Bill (H. R. 1975) providing among other things $1,200,000 for medical nursing and hospital maternity and infant care for wives and infants of enlisted men. Michigan was allocated $37,500 for services to June 30, to be administered by the Department of Health. Plans for the Michigan program were presented to the Executive Committee April 15 by President Cummings, and referred to the Child Welfare and Maternal Health Committees for study. They met with Dr. Lillian Smith of Michigan Department of Health, the plan was thoroughly threshed out, objections to many of its provisions were voiced, and it was referred to County Medical Societies for opinion.

The report of this joint meeting and responses from 35 County Societies were reviewed at the May 19 meeting of the Executive Committee. Based on these reports a modified proposal was drafted. This was to be submitted to Commissioner Moyer and then to the County Societies for approval. Without waiting for this action a plan was sent in from Michigan Department of Health, approved by Washington, and authorization blanks were distributed. This plan called for direct subsidy to physicians and was not approved by the Council, but unfortunately many of our members signed the blanks. The Council continued its study through a special committee headed by Dr. E. F. Sladek, and on June 16 approved a plan calling for payment of benefits to recipients of service, and maintenance of the patient-physician relationship on a fee basis. July 17, a joint meeting of the Council of

the Michigan State Medical Society, the Michigan Advisory Health Council, and representatives of the Michigan Health Department was held. The Advisory Health Council brought in a resolution stating that they were opposed to direct subsidy of physicians, our Council reaffirmed its position of desire to coöperate in a plan based on the above principles, and Dr. Smith of the Department of Health volunteered to present this proposal to members of the Children's Bureau, August 2.

We were not advised of the decision of the Children's Bureau on this proposal, and as no report seemed to be forthcoming our committee asked for a conference with Commissioner Moyer. We met in his office September 1, and were very graciously received. After a few minutes' discussion Dr. Moyer advised us in effect that he is without authority to change any of the major provisions of the program, information that we should have had last April 15. It would seem that the money is provided, the rules of the game laid down, and the play directed from Washington. There is no shortage of funds, $4,400,000 having been appropriated for this fiscal year; and here are some of the rules under which the plan has operated to date:

1. Payment may not be made to recipients of service but must be paid as a direct subsidy to attending physicians.

2. Patients are not eligible for Hospital benefits unless their physician signs the authorization blank stating that he will accept the government fee in full payment.

3. Hospitals cannot be paid until the physician has signed on the dotted line.

4. Any enlisted man's wife is eligible for this service unless she demands better than a ward bed.

So, for the doctors of Michigan, the plan turns out to be not one of coöperation with the State Department of Health in the care of our citizens, but one of coercion by the Federal Children's Bureau excused by them on the grounds of war necessity. Are we so gullible as to believe that this program will end with the termination of the war? Or so guileless as to think that the purveyors of governmental pap will not have ink to write "veteran," where it now reads "enlisted man?" Is it reasonable to suppose that when that time shall come, wives and infants will be cared for at government expense while fathers and older children are treated as private patients? Is it probable that fields of medicine and surgery other than obstetrics and pediatrics will not be invaded? No! the handwriting is on the wall, gentlemen. It's up to us to read it. Unless we curb this type of activity the death knell of private practice, as such, has been sounded. Should you seek further proof on this point, please read the provisions of the Wagner-Dingell Bill recently introduced into Congress.

There will be read at this meeting a declaration of medical policies, and a resolution designed to put those policies into effect. It is desirable that every member of our Society sign the declaration and support the resolution in spirit and in action. The postwar period will bring changes, and demands for changes, in methods of medical practice. We should be organized, informed, and alert; prepared to participate in sound evolutionary progress; prepared to oppose every group and every movement seeking to prostitute profession and public alike, under the false banner of "adequate medical care."

THE VICE SPEAKER: If there are no objections from the House, this report will be referred to the Committee on Officers' Reports.

(The Speaker resumed the chair.)

THE SPEAKER: The next order of business is the President's Address. Dr. Howard H. Cummings.

III. President's Address

As we meet today to begin the deliberations of the 78th Annual Meeting of the Michigan State Medical Society the over-all picture of our national situation is decidedly brighter than it was one year ago. Some of the problems which confronted us then—problems arising out of a world war—are still with us, but many of our more pressing needs have been met. Then we faced a hasty preparation for war. Today our medical profession is ready and functioning efficiently both in the military and civilian fields.

In our state the decisions as to which physicians were to serve at home and which were to serve in the military branches have been made. The splendid, patriotic response of our doctors of medicine solved this problem in a much shorter time than was required in many states. A total of 1,841 doctors in Michigan answered the call of duty. Today only the younger men, as they complete their internships and graduate studies in medicine, will be needed to supplement the long roll of Michigan physicians now on active duty. For this achievement great credit must be given to our State Society Medical Preparedness Committee. Its chairman and members have labored long and well to bring about such splendid results.

While no deliberate attempt has been made to curtail the activities of our State Society during the past year, the restrictions placed upon all our people have limited to some degree our normal functions, yet a careful perusal of the delegates' handbook will show that our committees have functioned well in spite of all handicaps. If time permitted I might enumerate many outstanding committee activities and give credit to all committee members who served so faithfully during the past year. However, only a few can be mentioned.

Contrary to the belief of many, our postgraduate medical activities have been well attended. The keen interest in the subjects presented has proved beyond a doubt that if our programs are made up of subjects useful to the doctor of medicine and beneficial to his patients, he will take time to attend even during a world war. In the spring a postgraduate meeting arranged for the Tri-State Medical Society had an attendance of over 500 physicians. In Detroit, the Industrial Health Committee sponsored a one-day meeting on industrial medicine and surgery. At this meeting 418 people registered and maintained their interest throughout the whole program. Our extramural courses were well attended during the spring, and the fact that over half the physicians in the Northern Peninsula came to the meetings in that part of the State was most gratifying. Their interest and appreciation have earned for them a permanent place in our extramural postgraduate medical plan.

With far-sighted vision the Committee on Postgraduate Medical Education is turning its attention to postwar plans for medical education. Knowing that there will be a great demand from our doctors in service to review many phases of medical progress, your committee, coöperating with our two medical schools and our national organizations, is now outlining courses to be offered after the war.

During the past few months we have witnessed in our own state a Federal bureaucratic invasion of the field of medicine through our State Department of Health. All of you are aware of the offer of the government to furnish both obstetrical care for the wives and pediatrics care for the children of servicemen in the lower income groups. Many of you know the details of the plan. No thinking person would question the patriotism of the medical profession; its record of service during this war is common knowledge. That the doctors of medicine have always been willing to coöperate in the medical care of soliders'

and sailors' wives cannot be denied. Nevertheless, the medical profession has opposed certain features of the government plan and has questioned the methods by which it was introduced into our State. Repeated conferences between the Commissioner of Health and the Director of the Bureau of Maternal and Child Health promised to bring about a satisfactory solution of this problem. However, when the proposed plans were submitted to the county medical societies of the State the majority voted against the plan. Apparently growing impatient at the delay, the Commissioner of Health ordered the blanks distributed without the consent of the medical profession of the State. It seemed to be the feeling of the Director of the Bureau of Maternal and Child Health that the State Medical Society did not desire to coöperate but rather was trying to obstruct the obstetrical service to enlisted men's wives and pediatrics care for their children. As a matter of fact the impasse between the medical profession of the State and the State Department of Health was caused by the proposal that Federal money was to be paid directly to the physician for obstetric and pediatric services. Our doctors objected to this but had no objection to a direct payment to the wife of the serviceman who would receive the medical care. To some this may seem trivial but to the majority it is a fundamental principle.

Consequently, the Federal Government is practicing medicine in our State today under the auspices of the Michigan Department of Health and the Director of the Bureau of Maternal and Child Health. Though the plan as it is operating has not been approved by the Michigan State Medical Society, many of our doctors of medicine, for patriotic reasons, feel obliged to render these medical services. It would appear that the State Department of Health has won out in the present controversy. We must recognize, however, that something of great importance has been destroyed. Over the last ten years a coöperative spirit has existed between the Michigan State Medical Society and the Michigan Department of Health. This coöperation has made for success in many undertakings. It is natural to believe that future plans presented by the Michigan Department of Health to the Michigan State Medical Society will be viewed with suspicion and distrust. This is regrettable. Let us hope that it is still not too late to find an intelligent and mutually satisfactory solution to this disrupting problem.

Your officers and representatives have opposed and are continuing to oppose the introduction of socialized medicine into our State under the guise of wartime need. They refuse to reward our 1,841 doctors of medicine in service by handing back to them their practices directed and controlled by a bureau of the Federal Government and the Michigan Department of Health. Your officers cannot win this fight alone. The support of every doctor of medicine in our State is needed. We must strike now before it is too late. Requests that letters be written to Senators and Representatives and to our state officers meet with halfhearted response. Why this lethargy? Why this defeatism?

For several years Michigan delegates to the American Medical Association have urged that our national organization have representation in Washington to direct proposed medical plans for the nation and to tell the people that contrary to ever-increasing propaganda American physicians are primarily interested in bringing the best medical services to all people regardless of their economic status. This objective cannot be stated too often or given too much emphasis. The efforts of Michigan delegates give promise of successful results.

In the Committee Reports printed in the handbook under "Annual Report of the Michigan State Medical Society Legislative Committee 1942-43" will be found a statement that 52 bills dealing directly with or touching upon the practice of medicine were considered by the 62nd Michigan Legislature. In the second paragraph of the report (in italics) is the statement: "On the other hand no proposed legislation that would have lowered our present high medical standards—and thereby would have been detrimental to the public health and welfare of Michigan—was enacted into law this session." Back of this splendid record stands the work of the chairman and thirteen committee members. All these men are extremely busy practitioners of medicine. Their efforts cannot be too highly commended. I feel, personally, that the chairman and all members of this committee would want to give full recognition to the tireless efforts of our Executive Secretary who aided the Legislative Committee during the 62nd Michigan Legislative session.

Some of our members will look askance at the activities of our Committee on the Distribution of Medical Care, but I believe it has approached the vital matter of proposed medical care for certain labor groups intelligently and in a coöperative spirit. The Committee realizes that direction and leadership will accomplish much more than obstructive tactics. The study of these questions will be continued by our Society.

It has been a rare privilege and a great honor to serve as your President during the past year. The help received from all our officers, councillors, chairmen of committees and their members and from the physicians of our state has been deeply appreciated. The experience has been most pleasant and I have but one regret: that it has been impossible for me to visit the membership in each county society.

In closing, the Michigan State Medical Society should take immediate action to form a postwar medical planning committee. Many clear-thinking members of this body have been devoting considerable time to a study of changes in medical service which will face us after victory. Such a committee should be an advisory one, aiding the members of our various state committees in solving postwar problems. It could be of great service in obtaining representative doctors of medicine to seek election to the Senate and House of Representatives of our National Government. It could also be of service to the American Medical Association in developing a strong public relations committee with a fearless and active program. It could neutralize propaganda for the Wagner-Murray-Dingell Bill, thereby preventing the Federal Government from controlling the practice of medicine in the U. S. It could emphasize the American principle of voluntary plans for medical services in contrast to compulsory Federal plans for these services. It could coöperate with the state government in defending state rights. It could aid in broadening the scope of Michigan Medical Service both numerically and in the services offered. It should plan to increase medical education for all doctors of Medicine and especially for members returning from military service. It should aid our fellow practitioners, as they are discharged from the military services, in reëstablishing their practices in the State. Also, it should assume, in part at least, the responsibility for offering better medical training to interns and graduate students in the hospitals of the State.

There are many more postwar problems which we will have to face. Let us begin now to prepare for the kind of medical practice which will bring the best medical service to all our people, the kind of practice that will give joy and satisfaction to the doctor of medicine who performs it.

THE SPEAKER: Thank you, Dr. Cummings. This report will be referred to our Committee on Officers' Reports. I am sure I don't need to say anything, nor should I say anything, to add to what Dr. Cummings has said. It simply shows the kind of president he has been throughout the year.

The next report is the Annual Report of the Council by A. S. Brunk, M.D., Chairman of the Council.

IV. Annual Report of the Council

The Annual Report of The Council for the year 1942-43 appears in the Delegates' Handbook beginning at page 31. As this report was written in July in order that it might appear in print, The Council wishes to submit additional information on matters which it has considered during the past two months.

1. *Membership.*—The membership of the Michigan State Medical Society as of September 18, 1943 totaled 4,671, including 1,135 military members who are granted a remission of dues.

2. *Authorization to Levy Assessments.*—Beginning in 1938 and continuing yearly since that date, the House of Delegates authorized The Council to levy an assessment of $5.00 on every member of the Michigan State Medical Society, as being justified in the opinion of The Council. The Council continues to be gratified at your confidence and is again happy to state that matters have been so well arranged in the past by its Finance Committee that no direct assessments were required during the last five years. However, the year 1944 will bring the problem of a greatly diminished paying membership, due to between 1,500 and 2,000 doctors of medicine serving in the armed forces with remission of Michigan State Medical Society dues, which may result in a necessary raise in State Society dues or in an assessment on those physicians who remain at home. A recommendation on the subject follows:

3. *Aggression of Sub-standard Practitioners.*—History shows that the cults thrive and strive during the confusion of wartime. The present emergency is far from an exception. Osteopaths who are not deemed qualified by the Army and Navy to care for our soldiers, sailors and marines, are exempt from military service and declared Essential for civilian service: Maximum aggression, with legislative attempts for greater recognition and increase in business, is now the program of this group. One unfortunate by-product is the growth of the osteopathic "hospital," so called, which knows no voluntary or governmental supervision of any kind. The chiropractors and even the naturopaths are striving to obtain as much from the Federal Congress and the Michigan Legislature as the osteopaths now have. Only the public will suffer from the bumptious encroachment of sub-standard practitioners who pave their path by developing a tremendous sympathy on the part of this very public and among members of Congress and State Legislatures.

The time has come for the medical profession to inform the public concerning the difference between a Doctor of Medicine and these self-styled healers. This information must be integrated to the people by every individual member of the medical profession. A subtle mouth to mouth campaign should be started immediately, and maintained throughout the years. This infiltration of knowledge should include interesting stories from the history of and on the achievements of medicine. The Doctor of Medicine must let the people know what he really is, what he is doing and also what he is doing for his patients, and why.

A total of 95,640 persons reach maturity each year in Michigan. To bring medical information to 95,640 people alone would be worth while. Add to these new adults the millions already in the field—begging for a greater knowledge of medicine—and the size of the job with the magnitude of the results to be achieved is apparent. A recommendation on this subject follows:

4. *Hospital Licensing Law.*—The urgent need for improvement in hospital standards in this State has been invited to our attention by the Michigan Hospital Association. To accomplish this desirable result, the Hospital Association urges the enactment of a Hospital licensing law in Michigan. A Recommendation on this subject follows:

5. *Revision of By-laws' provisions re Ethics.* The Council referred this work to the Committee on Revision of Constitution and By-laws (C. L. Hess, M.D., Chairman) which made a detailed study of the matter. The Committee's final report will be presented to the House of Delegates by Chairman Hess.

6. *Obstetric-Pediatric Care for Wives and Infants of Enlisted Men.*—This subject was presented in the Annual Report of The Council (page 36 of the Handbook) and is the basis for our Recommendation No. 3 (page 41 of the Handbook).

Since the Annual Report was written much has happened, with the Michigan State Medical Society membership being kept informed by first-class mailings and through the Michigan State Medical Society Journal. The Council's Special Committee (P. L. Ledwidge, M.D., Chairman, C. R. Keyport, M.D. and L. Fernald Foster, M.D.) submitted the following recommendations which were approved by The Council on July 17th. They are as follows:

(a) Continued opposition to the plan based on direct payment to the physician.

(b) Support of the plan based on direct grant to the enlisted man's wife and infant.

(c) That a letter to be sent to each member of the State Society stating the dangers of coöperating with the plan based on direct payment to the physician, and our reasons for opposing the establishing of this precedent.

(d) That a poll be made of the individual members of the State Society, this poll to indicate the willingness or unwillingness of the physician to refuse to sign blanks, except for the direct payment to the patient.

(e) That in either event, provision be made for those patients whose blanks have already been signed.

The results of the poll, to September 11, 1943, are as follows:

Total number of replies received—1,842.

Question 1.—I approve the decision of The Council of the Michigan State Medical Society, The House of Delegates of The American Medical Association, and the Michigan State Advisory Council of Health declaring that payment direct to physicians for obstetric-pediatric care to wives and infants of enlisted men is wrong in principle.—(Yes 1,631; No 95).

Question 2.—I shall refuse to sign blanks for participation in the governmental program as offered to date.—(Yes 1,473; No 111).

The Special Committee contacted State Health Commissioner H. Allen Moyer on September 1st, who stated the plan, developed and administered by the U. S. Children's Bureau in Washington, D. C., could not be altered by him and that the Bureau officials refused to make the grants direct to the servicemen's wives and dependent infants. The Children's Bureau's interpretation of the sentence in the Appropriation Act (H.R. 2935) which set up this federal program is that: "The appropriation can be expended only by the State Health agencies actually to purchase medical, nursing and hospital care for wives and infants of enlisted men in accordance with state plans approved by the Children's Bureau." It is to be noted that the proposed enabling legislation (H.R. 2041) mentioned

in Recommendation 3 of the Council's Annual Report), was buried in a Congressional Committee after this program was assured by the simple expedient of including it as one item in a necessary appropriation act.

The Council feels that the establishment of this precedent makes possible a broader program leading to a system of complete federal medical practice, administered by governmental agencies whose field is preventive and not curative medicine, and that the Michigan State Medical Society should continue to disapprove the program based on direct grants to Doctors of Medicine. A recommendation on this subject follows:

7. *Bureau of medical information in Washington, D.C.*—The need for continuous, on-the-spot representation of the medical profession in Washington, D.C., is more and more apparent to the rank and file of the medical profession. A recommendation on this subject follows.

8. *Cooperation with Allied Groups and Professions.*—During the past few months, joint meetings have been held with representatives of the Michigan Hospital Association, Michigan Hospital Service, and Michigan Medical Service in an endeavor to pool the efforts of those organizations in solving mutual problems. The Council of the Michigan State Medical Society, at its meeting of July 17th, 1943, authorized the creation of a joint committee, which committee has been organized and has held two meetings to date. Much good to all concerned, and to the public, should come from this coöperative movement.

* * *

Recommendations.—The Council's first recommendations are published in the Handbook on pages 40, 41, 42. I shall read them (except recommendation 3) to reinvite them to your attention.

1. That the individual members of the House of Delegates become "Ambassadors" of our Postgraduate Foundation and encourage other Doctors of Medicine, as well as laymen interested in sound medical service and education, to contribute during life and in their wills to the MSMS Foundation for Postgraduate Medical Education.

2. That the House of Delegates, formally express the medical profession's appreciation and gratitude to the intelligent and health-minded members of the Michigan Legislature and to the Governor and Lt. Governor for their thoughtful consideration of the legislative problems of the medical profession, and for the courteous reception they extended to our representatives during the 1943 sessions.

4. That county or district medical societies having arrangements whereby medical welfare (including Afflicted Adult care) is given at less than cost price or below the fee schedule of the Michigan Crippled Children Commission, be urged by the House of Delegates to make special efforts immediately to negotiate necessary revisions in its schedules of benefits so that individual members are not penalized by being forced to perform services at a financial loss.

5. That the Basic Science Board be respectfully urged by the House of Delegates to investigate the influx into Michigan of sub-standard practitioners who are said to be emigrating from other states having rigid requirements made by legislative action or judicial determination, and that the Board vigorously enforce Section Six of the Basic Science Law (Act 59 of the Public Acts of 1937) which states:

"No examining board for any branch or system of healing shall admit to its examinations, or license, or register, an applicant to such board, unless such applicant shall first present to said board a certificate of eligibility in the basic sciences issued under the provisions of this Act":

and that the Michigan State Medical Society offers its encouragement and support to the Basic Science Board in the accomplishment of its responsible tasks.

6. That county medical societies consider approval of the "screening" program of fathers of Dependent Children, sponsored by the Michigan Social Welfare Commission, in the light of its advantages to the fathers of Dependent Children who can be rehabilitated, and to the taxpayers who will be relieved of a considerable financial burden.

7. That Military Membership in the MSMS be offered to all Michigan Doctors of Medicine who are in Military Service provided approval of the individual physician's name is given by the county medical society in which he practiced prior to his entrance into military service.

8. That the House of Delegates consider an amendment to the MSMS Constitution to provide a new membership classification, such as "Temporarily Retired Members," in order that the membership of the occasional physician who is forced out of practice due to protracted illness may be continued, without the payment of dues.

9. That the House of Delegates consider the adoption of a Resolution strongly opposing the Wagner-Murray-Dingell Bill (S. 1161, introduced into Congress June 3, 1943) as well as any other scheme leading to a complete compulsory sickness insurance program organized and maintained by the government; and that county medical societies and their individual members maintain vigorous action against the gradual intrusion of government in the private practice of medicine so that the proponents of State Medicine shall not be successful in their aggressive attempt to socialize medical practice during wartime.

* * * *

The Council offers these additional recommendations, covering matters presented in the supplemental report:

1. That, in view of the demise of H.R. 2041, this recommendation be considered by the House of Delegates in lieu of Recommendation No. 3 which appears in the Annual Report of the Council (page 41 in Handbook).

That the House of Delegates consider the adoption of a resolution to insure the following democratic principles:

That the Obstetric-Pediatric Care Program for Wives and Infants of Servicemen be approved

(a) if the federal grant be made direct to wives and dependent infants of enlisted men to provide the necessities of life, including medical care:

(b) if such federal funds so paid to enlisted men's wives be used by the recipient as necessity requires:

(c) if the physician-patient relationship is maintained:

(d) if the program ends six months after the termination of the present war:

but that the plan be disapproved if based on direct payment to the physician:

Further that the House of Delegates respectfully request the American Medical Association, through its new Council on Medical Service and Public Relations, to use its influence to effectuate a change in the present program as legislated by the Children's Bureau: and

Finally, that the House of Delegates urge all component societies and members of the Michigan medical profession to continue contact work and efforts with Michigan Senators and Congressmen in Washington, D.C. to counteract the gradual intrusion of State

Rights, as exemplified in the Children's Bureau program of Obstetric-Pediatric Care.

2. That the House of Delegates reaffirm its authorization to The Council either to levy a capital assessment, or assessments, not to exceed a total of $5.00, or to increase the dues of the State Society for the year 1944 by a sum not to exceed $5.00, in addition to the present annual dues, as seems justified in The Council's considered opinion.

3. That a sustained, subtle mouth to mouth campaign of information to the public, integrated by and through every member of the Michigan medical profession, concerning the history and accomplishments of Medicine and what it takes to be a Doctor of Medicine, be inaugurated immediately by County Medical Societies: that the program be explained by the Delegates to their County Societies at the first regular meeting this autumn: that a campaign to the public to "Preserve your health by the best medical care. Be sure your doctor is a Doctor of Medicine," be instituted by each component society through public lectures, posters, personal contact and all other ethical means, not only to inform the people on how to obtain good medical care but also to help cut down ill health and absenteeism during wartime.

4. That the House of Delegates of Michigan State Medical Society consider the adoption of a Resolution approving in principle the enactment of a Hospital Licensing Act to improve hospital standards in the State of Michigan.

5. That the House of Delegates of the Michigan State Medical Society seriously consider the adoption of a Resolution urging the establishment, at the earliest possible moment, of a bureau of medical information in Washington, D.C. by the Council on Medical Service and Public Relations.

THE SPEAKER: Next is the President-Elect's address.

V. President-Elect's Address

Each year as this House of Delegates convenes, we have been confronted with problems, some of which may have brought out fiery discussion but after the smoke of battle cleared away, we worked out our problems, by careful deliberation, to the satisfaction of all of us.

Now, in time of war and in an ever-changing world, the science and art of medicine is changing and will continue to change. New treatments, new drugs, new surgical procedures, and new appliances are appearing, and we must keep abreast of these newer developments. I believe that this is being done through our excellent program of post-graduate medical education.

At the same time these changes are taking place, the economics of medical practice are changing and will continue to change. The old America, I believe, is gone forever, and the new America is in the making. We must ever be alert to proposed legislation which will definitely affect us; and to broaden our horizon, we must narrow our vision.

This is not as paradoxical as it may seem. To broaden is to understand more clearly the entire scheme of things in this complex universe. To narrow our vision is to fasten it on the workings of our own specific task (what we can do) in making that task do its part most effectively. In a broader sense, we are guilty of our own brand of isolationism. We have sat at the top of our own particular heap and cared little for the very important over-all developments that affect our position.

Isolationism of this type would not be so tragic if we did not have to consider the actions of others who have definitely abandoned isolationism in favor of increased participation in politics. This hits *us!*

There are two conclusions which become very apparent. We are not going to get at what we think is wrong internally; nor are we going to safeguard ourselves for the future by going to governmental bureaus. Furthermore, we are going to get at the solution of our problems and certainly arrive at a more over-all approach to our postwar difficulties and misunderstandings when we quit being too nice to vote. When we get over our fear of mixing in politics and with politicians. We must know, *personally,* our State Representatives, State Senators, United States Congressmen and United States Senators!

With the present proposed legislation which would destroy the entire practice of medicine in America and which is a threat to the very existence of the medical profession, we must take a very definite stand. I feel that the "Declaration of Medical Policies" which will be presented by the Wayne delegates is a most important and vitally needed declaration at this time. I sincerely hope this will be endorsed 100 per cent by the doctors of Michigan.

Our horizons *are* broad. Broad thinking is required today. Postwar worries crowd down upon us. It seems like a rushing, roaring, engulfing river. It appears hopeless. It *is* hopeless unless we reach into that maelstrom and tug away at that which will quiet and control it. That opiate is the vote your Congressman and your Senator can cast. Here is our only real source of power. Here is our only chance, our salvation! The salvation of Medicine!

To broaden your horizons, find out what your are really fighting for, and be willing to fight for it when the battle is really being fought. In order to accomplish these goals, your officers cannot do it alone.

As your president-elect during this past year, I have had the opportunity to see the untiring efforts of your officers, of the Executive Committee of the Council, of The Council, and particularly the tremendous amount of work done by our Secretaries, Dr. Foster and Mr. Burns; and I know that if every doctor of medicine in the Society would unite solidly with your officers, The Council and the members of the House of Delegates, that we can continue to practice the best type of medicine in the world and can do it without politicians, social agencies or governmental bureaus.

I sincerely hope that each delegate will take back to his county society the seriousness of this hour and that through him, we will have a solidarity that will be outstanding and one that will be looked upon with respect and admiration by the State Societies of our sister States.

Let us look forward to the future and to a new America. I was quite impressed by a recent editorial by Malcolm W. Bingay when he said in speaking of a new America in the making, "it can be the America of our dreams. But there will have to be a spiritual wakening first. There will have to come a sincerity of leadership, now lacking, a decline of the melodrama, the emotionalism and the bunk from all sides that we are now getting. When that leadership appears, the people will instinctively recognize it."

THE SPEAKER: Thank you Dr. Keyport. You see the kind of heads we are going to have next year. So we can go right ahead.

We will now have the Report of the Delegates to the American Medical Association by Dr. L. G. Christian.

L. G. CHRISTIAN, M.D.: Mr. Speaker, Officers, Members of the House of Delegates: Your Delegates from the Michigan State Medical Society to the American Medical Association think they have an important message to bring you, a message that may not look too well in print. The Speaker has granted me the privilege of ad-libbing, as have the delegates. I will read and ad-lib off the record.

VI. Report of Delegates to A.M.A.

The A.M.A. House of Delegates convened in Chicago, Monday, June 7, 1943. There was no general session of the Association due to war. No exhibits. No Scientific programs. The entire Michigan Delegation: Henry A. Luce, Claude R. Keyport, T. K. Gruber, Frank Reeder, Grover Penberthy, Burt Shurly, Jean Pratt, and L. G. Christian—was registered and attended all sessions of the House.

As is usual the House opened with an address by the Speaker, Dr. Harrison N. Shoulders of Tennessee, who admonished the Delegates to become Medical Statesmen rather than Medical Politicians. This was the first hint of defeatism and it was quickly followed by an address by the retiring president, Brigadier General Fred W. Rankin, whose speech reflected more defeatism as he said, in part:

"Have we so long basked in the luxuriating rays of medicine as the apotheosis of professions that we have become languid and inelastic in our attitude and hesitant and fearful in our response to existing socioeconomic developments? I sincerely hope not.

"It is becoming increasingly apparent that the trends now gathering momentum are directed toward some form of national health service as an integral function of the state. Proposals of this nature by governmental postwar planning agencies, both here and abroad, have been the subject of deep consideration, wide editorial comment and cogent discussion. This mood has been further reflected in recent comments by various medical and nonmedical writers who have penetrated with incisive clarity to the very heart of this controversial subject."

Then followed President-Elect James E. Paullin of Georgia who told us just what we should expect after the war in the way of government control. In other words, we are inclined to believe that the indictment and conviction of the AMA has had very definite effect upon our officers and employes of our association.

The Editor of *The Journal* was conspicuous by his silence.

The Military was fully represented. Surgeon General Normal T. Kirk addressed the House concerning the Medical Department's outstanding performances in the North African Campaign. He complimented the Medical Officers on the very brilliant work accomplished. "I talked after this to General Eisenhower, the commanding general of the forces there and to General Clark, the commanding general of the Fifth army, and they both assured me that the outstanding thing that happened in that campaign was the services rendered by the Medical Department."

Brigadier General David N. W. Grant, Flight Surgeon, also addressed the house on the Medical Air Corps.

The President of the American Bar Association brought greetings as did the Secretary of the Canadian Medical Association. Then came the report of the Officers Board of Trustees on the numerous activities of the Association. Supplementary reports on the decision of the Supreme Court of the United States.

"Supplementary report of the Board of Trustees. Decision of the Supreme Court of the United States. The decision of the Supreme Court of the United States in regard to the case involving the Medical Society of the District of Columbia and the American Medical Association was announced on Jan. 18, 1943, and was published in the *Journal* on January 23. On the advice of counsel a check for $2,500 has been sent to pay the fine assessed by the District Court against the American Medical Association. Following further advice of counsel analysis or interpretation of this decision has not been made."

The Trustees also reported on Corporations and Hospitals in the Practice of Medicine and on Roentgenologist vs. Hospitals. The House adopted a report on the Practice of Medicine by Corporations, and reemphasized the dangers of hospitals selling professional services. A subcommittee of the Board of Trustees, of which R. L. Sensenich, M.D., of South Bend was chairman submitted an outline on these subjects. Statements made during recent months by representatives of Michigan Hospital Service to the effect that Blue Cross Plans (Hospital Service plan) must extend their scope to offer professional services including home and office care, dentistry and nursing were cited in the House as one of several alarming developments calling for strong action on the part of medicine to keep hospital and professional services clearly defined. It was stated that the intention of leading hospital forces is to take over the administration of the practice of medicine centering it around hospitals as recommended by the committee on the Cost of Medical Care some ten years ago. The movement was referred to as starting with x-ray pathology, physiotherapy, anesthesia, gradually engulfing the practice of medicine. It is hoped that the American Medical Association will have enough influence with the American Hospital Association to persuade them to turn "thumbs down" on the Blue Cross plans.

New Business

Committee on Medical Service.—Minnesota, Dakotas, Kansas, Nebraska, Oklahoma, Indiana and New Jersey all presented resolutions favoring a more active program in public relations and information to the members of Congress and the public. Some asked for an office of information to be located in Washington, D. C., that the National Legislators be informed of the activities and the viewpoints of the practicing physicians of the United States. These resolutions were the most important and attracted the widest discussion of the whole meeting. The committee hearing attracted an audience of the majority of the Delegates. The opinion was nearly unanimous. At one period of the hearing the Secretary of the Association voiced fear that we would create a Lobby and would lose caste. Despite the fact that many state societies and associations have set agencies to protect their interest in State Capitols, our Secretary appears to think that the Congress is composed of a different brand of humans who would be affronted by a Bureau in Washington, D. C., where the truth of medical opinion could be had. The Committee on Legal and Public Relations submitted the following report after considering the many resolutions of the various states.

"Your reference committee recommends the formation of a Council on Medical Service and Public Relations to be composed of six members of the American Medical Association geographically distributed over the United States, with the President, the immediate Past President, the Secretary and a member of the Board of Trustees of the American Medical Association. For the first year the six members shall be appointed by the Board of Trustees. The term of Membership of the Council shall be three years, provided that at the end of the first year there shall be an election of two members for one year, two for two years and two for three years. After the first year the Board of Trustees shall present to the House of Delegates for election to membership on this Council a list of three nominees for each vacancy. The chairman shall be selected by the Council from its elected members. The duties of the Council shall be: (a) To make available facts, data and medical opinions with respect to timely and adequate rendition of medical care to the American people; (b) to inform the constituent associations and component societies of proposed changes affecting medical care in the nation; (c) to inform constituent associations and component societies regarding the activities of the Council; (d) to investigate matters pertaining to the economic, social and similar aspects of medical care for all the people; (e) to study and sug-

gest means for the distribution of medical services to the public consistent with the principles adopted by the House of Delegates, and (f) to develop and assist committees on medical service and public relations originating within the constituent associations and component societies of the American Medical Association.

"In the exercise of its functions this Council, with the coöperation of the Board of Trustees, shall utilize the functions and personnel of the Bureau of Legal Medicine and Legislation, the Bureau of Medical Economics and the Department of Public Relations in the headquarters office.

"The Board of Trustees shall provide adequate facilities for these activities and shall prepare necessary changes in the by-laws to accommodate the purpose of this report."

The House seemed to be in agreement even though the real purpose of the various resolutions, i.e., a bureau of information in Washington, was deleted. Then a very strange parliamentary procedure occurred. We witnessed the unusual occurrence of the Secretary of the A.M.A. standing before the House debating the question and continuing to do so for a matter of twenty minutes, relating strange stories of the "Big Bad Wolf" —the Department of Justice. Then the south attempted to befuddle the issue with amendments and tangle the parliamentary procedure. Finally the above report was carried and a partial loaf was obtained. Whether any real progress will be made no one can say. This much was clear—the Delegates are fed up on the apparent fear of the A.M.A. to the Washington Bureaucrats and they want at least an honest attempt to see the Law Makers and give them our ideas on the future practice of medicine and try to stop some of the crackpot ideas of the socioeconomic dreamers who plan to make life so easy for people from the cradle to the grave regardless of income. The resolution on Medical Care for wives and children was approved with the same restrictions that the Council of MSMS placed on it in their negotiations with the State Department of Health. Your delegates are disappointed with the actions of the House in not going all the way to protect the Private Practice of Medicine in the action of certain Delegates who failed to heed the Speaker who asked that they be Medical Statesmen but who remained as ever politicians of various hues.

We are particularly disappointed in the defeatist attitude of our officers and certain employes whose attitude appears to be "Why Fight, You Are Already Licked"; "So Let's Join Up and Coöperate."

We commend the action of the Delegates from those 12 or 15 states of the Middle West, the Southwest, Atlantic and Pacific Coasts. The optimist may say, "Well, we got something." The practical person will say, "Yes, but we must continue to fight, fight, fight." Something may come sometime but beware of the Southern breeze.

Henry A. Luce, M.D.
Claude R. Keyport, M.D.
T. K. Gruber, M.D.
Frank T. Reeder, M.D.
L. G. Christian, M.D.

The Speaker: This will be referred to the Reference Committee on Reports of Officers.

From the things that have been said, you can readily see that this is a time for battling for our rights. Fortunately, there are friendly groups outside of our own, who think as we do, at least on these fundamental principles. One of those groups is the State Association of Supervisors.

We are happy to have with us tonight a man to represent them, a man who has been their presiding officer on nine occasions. It is a pleasure to present at this time Milton S. Van Geisen, Director of Welfare for Genesee County: Honorary Member of Wayne County Medical Society, and a good American citizen. Mr. Van Geisen.

VII. New Business

VII-1. ADDRESS OF M. S. VAN GEISEN

DEMOCRACY AND FREEDOM BY DECENTRALIZED GOVERNMENT

It is with sincere pleasure that I appear before you tonight, you who are members of the oldest and the most honorable profession in the history of the world. Representing as I do tonight the State Association of County, City and Township Supervisors, and the State Association of County Social Welfare Boards, I desire to bring you a message, expressing how we as laymen feel about all elements of centralized government. The Township Supervisor form of government is as old as the nation, and it is that type of government that made these United States one of the greatest countries in the world. It is a type of government where local people administer local affairs. The Township Supervisor is beyond question the closest elected public official in our present form of government. His neighbors and the people of his township go to him with suggestions for improvements in the laws that will benefit their community, and ofttimes to seek advice regarding some of their own private affairs; he is in constant touch with his constituents throughout the year, and that, my friends, is the foundation of the Democracy that we have lived under and have grown to know.

The 1937 legislature at the insistence of Governor Murphy and of an organization known as the Michigan State Conference of Social Workers, passed welfare legislation, which if it had been allowed to become a law and placed upon the statute books of the State, would have directly or indirectly affected the lives of every man, woman and child, within the state of Michigan. It would have abolished local control and local administration of direct relief, adult hospitalization, and county infirmaries, and county hospitals, and would have given complete authority to a branch of state government under federal direction to select the personnel, establish the salaries, promulgate the policies, and the type of relief administration in every county in this state and the citizens of these communities and their locally elected official and would have had no voice in the administration of these services but they would have been required to pay the entire cost. This legislation would have also established the practice of State Medicine, and had it become a law you would have had State Medicine in effect in Michigan five years earlier than the present attempt to establish it.

The State Association of County Social Welfare Boards, then known as the State Association of Superintendents of Poor, with the aid and help given it by the State Association of Supervisors, the Wayne County Medical Society, the Veterans Organizations throughout the state and many other groups interested in preserving Democracy and the rights of local people to administer local affairs, fought this legislation by carrying the fight to the public and initiated a referendum, which prevented the proposed legislation from going into effect until the people had a chance to vote on it, and decide for themselves whether or not they wanted it, and when the true facts were laid before the public and they learned for the first time that an attempt was being made to usurp a part of their local government and to establish the practice of State Medicine, they defeated it with their ballots in the Fall election of 1938, by over a one-hundred thousand majority. I need not tell you that if they had been successful in procuring this legislation it would have been the opening wedge, and the stepping-stone for abolishing all forms of local government and replacing them by Federal and State Controlled Bureaus and Boards, and I say to you that when you have government by Boards and Bureaus you do not have representative government, or Democracy as we know it. There is in Congress today a dangerous piece of legislation known as the "Wagner

Bill," should Congress pass this legislation it will eventually affect the lives of all the people of the United States, and will create Federal and State Control of medicine, and I hope that you men who are here tonight will rise up on your toes and will get your friends and your neighbors, and the other members of your profession, who are not present, to tell your congressman and your United States Senators that the people of this country do not want this kind of regimentation; they want the right to govern themselves, to run their own affairs, choose their own doctors, select their own attorneys, and worship God in their own way. I am confident the practice of medicine as prepared by the Wagner Bill will increase the cost to the patient, and at the same time deteriorate the standards of medical practice. A striking example of Federal dictatorship, is the plan now in effect in the feeble attempt to provide medical and maternity care for service men's wives. Instead of providing the applicants with the funds for this care and permitting them to pay the doctor, of their own choice, in the American way, they are required to accept it under a federal plan, through a federal controlled bureau, or agency. After all the federal government would not have this money if they did not get it first from the people back home. Therefore, it would seem the most practical way, the most common sense way, would be to permit the people back home to spend it without dictation from Washington.

Truly, the Supervisor form of government is the foundation of American Democracy, and it is this type of government that has made America what it is today. A freedom and a way of life of which we are all extremely fond and proud, a type of freedom for which your sons and mine are fighting and dying on foreign soil now, this very moment, to maintain and preserve. The Supervisors organization is not only a Michigan organization but there are many other states that have an organization of Supervisors or Township Trustees. These organizations are not selfish political organizations, they are primarily interested first, in serving the people of the community, in the most practical and efficient manner, and as the times and conditions change, in securing legislation that will permit them to do the greatest good for the majority of the people; therefore I take this opportunity to urge you as professional men, as an organization, as citizens, to become acquainted with your Boards of Supervisors, contact them more often with your problems, offer your services to them in helping solve their problems, work with them in procuring state and national legislation that will do the greatest good to the greatest number of our citizens. Otherwise your indifference to local and civic affairs can very easily prove costly to you and harmful to our citizens. You can depend upon it that once an aroused public has the true facts their judgment won't be far wrong. I wish also to warn you against falling for or being victimized by propaganda put out by organizations and agencies having so-called respectable fronts. They are not working for your interest or for the interest of the citizens as a whole, but on the contrary are endeavoring to promote certain ideas that will benefit only a certain few. We stand ready and I wish tonight to offer you the services and all the facilities of the State Association of the County Social Welfare Boards, and the State Association of County and City and Township Supervisors in preparing, to secure if possible, any state or national legislation or program that will protect or benefit the American citizens, in the American way.

In closing, it has been a privilege and a pleasure indeed to have been with you tonight, and I trust the message I have brought you will prove of future value to all of us.

THE SPEAKER: We appreciate that very much, Mr. Van Geisen.

The next order of business is the offering of resolutions.

VIII. Resolutions

VIII-1. EDUCATIONAL FUND (Springer)

R. A. SPRINGER, M.D. (St. Joseph):

WHEREAS, The practice of medicine is a noble art, and its finer aspects, principles, and altruistic purposes should be more and more emphasized (especially during these chaotic times) and perpetuated to posterity for further enhancement, and

WHEREAS, All these purposes, principles, and high ideals are enhanced when a son follows in his father's foot-steps, and

WHEREAS, It is sometimes found that practitioners of medicine, while contributing much to the art, are often lacking in ability to accumulate an adequate estate to provide for the continuance of the medical education of their offspring, therefore, be it

RESOLVED, That a fund be established by the Michigan State Medical Society from which a deceased or permanently incapacitated member's children might borrow to complete their education. Such fund to be raised by a contribution of only one dollar ($1.00) per year from each member for as many years only as is necessary to establish an adequate fund. A term life insurance policy on the borrower would insure repayment in case of death, the premium on same being paid by the borrower.

THE SPEAKER: Thank you, Dr. Springer. This resolution will be referred to the Reference Committee on Resolutions.

IX. Amendments to Constitution and By-laws

IX-1. REMISSION OF DUES OF MILITARY MEMBERS

C. L. HESS, M.D. (Bay): Mr. Speaker, Members of the House of Delegates: The Special Committee of the Council appointed to study ethics, memberships and so forth, have included some of the following resolutions:

WHEREAS, Active members should have their annual dues remitted while serving in the Military Forces of this country, be it

RESOLVED, That Chapter 8 of the By-Laws have added a new section to read as follows:

"Section 4. Active members shall have their annual dues remitted during the time they are on active duty in the Military Forces of the United States for periods of six months or more."

IX-2. ASSOCIATE MEMBERSHIP FOR PHYSICIANS IN MILITARY SERVICE

WHEREAS, It is desirable to offer membership in the County and State Societies to Doctors of Medicine residing in Michigan who enter into active Military Service of the United States before engaging in private practice, be it

RESOLVED, That Article III, Section 4 of the Constitution, giving qualifications for Associate Membership, have added a new subparagraph to read as follows:

"Physicians, residents of the State of Michigan, for the period of time they are in active Military Service of the United States previous to their engaging in active practice."

IX-3. MEMBERSHIP FOR PHYSICIANS TEMPORARILY RETIRED

WHEREAS, Active members may be unable to practice medicine for extended periods on account of protracted illness, and either be ineligible for transfer to Retired Membership or be unable to pay annual dues, be it

RESOLVED, That Article III, Section 4 of the Constitution, giving qualifications for Associate Membership, have added a new subparagraph to read as follows:

"Active Members, by transfer, for the period of time they are temporarily out of active practice on account of protracted illness."

IX-4. LIFE MEMBERS

WHEREAS, A resolution has been presented offering Emeritus Membership to members at the age of seventy years or more, and

WHEREAS, Any further reduction of active members paying dues, other than those in active Military Service, would seriously reduce the income of the Society, and

WHEREAS, Life Membership would represent years of age while Membership emeritus now represents years of service, be it

RESOLVED, That Article III of the Constitution have added a new section to read as follows:

"Section 8. Life Members. A Physician who has attained the age of seventy years or more and maintained an active Membership in good standing for ten years or more in the State Society may, upon application and recommendation of his County Society, be transferred to the Life Member's Roster by election

in the House of Delegates. He shall have the right to vote and hold office but shall pay no dues to the State Society. Requests for transfer shall be accompanied by certification by the Secretary of the State Society as to years of membership in good standing.

"The County Society of such member shall make request for certification, in writing, to the Secretary of the State Society thirty days or more in advance of the Annual Session;"

BE IT RESOLVED, further, that Article III, Section 1 of the Constitution have added to the list of memberships the following: "Life Members."

BE IT RESOLVED, further, that these amendments shall take effect and be incorporated in the Constitution at the Annual meeting following the termination of the present World War.

IX-5. "COMMITTEE ON VENEREAL DISEASE CONTROL"

RESOLVED, That Chapter 6, Section 6 of the By-Laws have the name of the "Committee on Syphilis Control" changed to "Committee on Venereal Disease Control."

IX-6. SUCCESSION OF PRESIDENT-ELECT

WHEREAS, The President-Elect automatically becomes the President when the office of the Presidency becomes vacant, be it

RESOLVED, That Article VIII, Section 2 of the Constitution, dealing with the election of officers, be modified to read as follows:

"The House of Delegates at each Annual Session shall elect the President-Elect, the Speaker and Vice-Speaker of the House of Delegates, and the Councilors. These officers shall be installed in the general meeting at which the reports of the House of Delegates are received. They shall serve until the corresponding time of the next annual session, except that the Councilors shall serve for five annual sessions. The terms of the Councilors shall be arranged so that not more than four terms expire normally at any annual session. All these officers shall serve until their successors are elected and take office.

"At the annual session next following his election the President-Elect shall be installed into and assume the office of Presidency immediately following the annual address by the retiring President and shall serve until the corresponding time of the next annual session. This assumption of office shall occur in the general meeting at which the reports of the House of Delegates are received.

"If no general meetings are held at the annual session, then induction into office of the incoming president and the newly elected officers shall be in the last meeting of the annual session of the House of Delegates.

"The Secretary, the Editor of the Journal and the Treasurer shall be elected by the Council in its annual meeting in January of each year. They shall take office immediately and serve for a term of one year or until their successors are elected and take office."

IX-7. OFFICERS' NIGHT

WHEREAS, It may be inconvenient to have the President's Annual Address delivered at the first general meeting of an annual session, be it

RESOLVED, That Chapter 2, Section 2 of the By-Laws be changed to read as follows:

"The following shall be the order of business in the general meeting at which the reports of the House of Delegates are received. This meeting shall be called the Officers' Night

1. Call to Order.
2. Announcements and reports of House of Delegates.
3. Retiring President's Annual Address.
4. Induction into office of the Incoming President.
5. Induction into office of the newly elected Officers.
6. Special Addresses, and
7. Resolutions and motions."

IX-8. DUTIES OF ETHICS COMMITTEE

WHEREAS, The Council has approved clarification of the duties of the Standing Committee on Ethics as recommended by the Special Committee to study procedures for ethical misconduct, be it

RESOLVED, That Chapter 6, Section 9 of the By-Laws be amended to read as follows:

"The Committee on Ethics shall consist of five members appointed by the President with the approval of the Council to serve for five year terms, so staggered that one member is selected annually, except that in 1944 one member shall be selected for a five year term, one for a four year term, one for a three year term, one for a two year term, and one for a one year term.

"If a member dies, resigns, or is disqualified prior to the expiration of his term, the President may appoint a successor to serve until the next meeting of the Council which, if it approves, may select him to serve the unexpired portion of the term.

"The following rights and duties devolve on the Committee:

"1. To render, on the request of the Council or of a component society, advisory opinions on questions of ethics submitted to it;

"2. To assist county societies in setting up schemes of integration between such county society committees as have duties and functions similar to the duties and functions of this committee and the Medico-Legal Committee of this Society;

"3. To integrate, so far as possible, its activities with the activities of the Medico-Legal Committee of this Society;

"4. On the request of a component society or of any member of this Society, to conduct such investigation or hearing, or both, as it deems appropriate, concerning the professional conduct of any member of this Society and to report to the component society to which the physician under inquiry belongs, its findings and conclusions as to the ethical propriety of the conduct in question for such further action as the component society may deem proper, provided however, that in the event of a finding adverse to the physician under inquiry if the physician agrees to amend his conduct to conform with the conclusions of ethical propriety made by the Committee, the Committee may be its discretion dispose of the matter and report its action to the appropriate component society;

"5. If a component society fails to institute disciplinary proceedings against a member with respect to whom the Committee has filed an adverse report, in its discretion to prefer written charges in the form and manner specified by the component society's organic laws with the secretary of the component society involved and, through a member or members of the Committee, to perform all acts that are reasonably necessary and proper in the prosecution of such charges; and

"6. To make annual reports to the State Secretary.

"A member who is guilty of any of the following acts shall be subject, in the discretion of the county society, to expulsion, suspension, or admonition:

"1. A criminal offense involving moral turpitude;

2. Gross misconduct as a physician or citizen;

3. Violation of the Principles of Medical Ethics;

4. The wilful commission of any act tending to defeat the aims, purposes, or objects of this Society or to bring the Society into disrepute;

5. The wilful refusal to adhere to the Constitution and By-Laws of the Society; or

6. The giving of any testimony in any court of law or administrative proceeding which in the opinion of the Council of the Society is reckless, wilfully false or fraudulent, or is not in keeping with the dignity or scientific standards of the profession."

THE SPEAKER: Those resolutions relative to the By-laws will be referred to the Reference Committee on Amendments to the Constitution and By-laws. Those relating to the Constitution will be referred to the 1944 House of Delegates.

VIII-2. RESOLUTION RE WAGNER-MURRAY-DINGELL BILL

E. R. WITWER, M.D. (Wayne): Mr. Speaker and Members of the House of Delegates: I should like to present the following resolution for your consideration:

WHEREAS, The Wagner-Murray-Dingell Bill S-1161 was introduced into Congress June 3, 1943, and

WHEREAS, This bill is of utmost importance to all physicians in the United States because it proposes the establishment of a unified social insurance system which would provide limited benefits for and extract extra tax payments from practically every employed person in the United States; and

WHEREAS, The annual expenditure provided for in this bill would be, in round figures, $3,000,000,000, or the approximate maximum total annual revenue of the Federal Governrment from all sources up to 1933; and

WHEREAS, It is estimated that approximately 110,000,000 people would be subject to its medical provisions, which would be administered by one man; namely, the Surgeon General of the United States Public Health Service; and

WHEREAS, The proposals of this bill are a definite menace to the true democratic principles of every American citizen and are particularly vicious as regards their application to the Doctors of Medicine; therefore, be it

RESOLVED, That a united Medical Profession take all necessary precautions to see that such proposed legislation is not permitted to become law; and be it further

RESOLVED, That the House of Delegates of the Michigan State Medical Society in executive session assembled September 20, 1943, strongly opposes in all its implications, and possible amplifications, the Wagner-Murray-Dingell Bill; and be it further.

RESOLVED, That we are equally opposed to all other schemes which would lead to any proposed compulsory sickness insurance, whether organized, controlled or administered by any branch of the Government; and be it further

RESOLVED, That all County Medical Societies and their individual members be advised to maintain and practice vigorous opposition against the gradual governmental intrusion into the practice of medicine; and be it further

RESOLVED, That we, as member of the Michigan State Medical Society, shall use every means at our command to combat the aggressive attempts of the proponents of State Medicine to socialize the practice of medicine during the present emergency, when many of our members are serving in the Armed Forces.

THE SPEAKER: This resolution will be referred to the Reference Committee on Resolutions.

X. Constitutional Amendments Presented in 1942

The Speaker wishes to announce that there are four amendments to the Constitution that were laid over from last year, that automatically go to that Reference Committee this year.

* * *

VIII-3. RESOLUTION RE "INSTITUTE ON PUBLIC HEALTH ECONOMICS"

D. R. Brasie, M.D. (Genesee): Mr. Speaker and Gentlemen, upon the request of delegates from counties other than Genesee, I present the following Resolution:

Whereas, The School of Public Health of the University of Michigan, in coöperation with the Rockefeller Foundation, sponsored an "Institute on Public Health Economics" in May of 1943, to inaugurate its new building; and

Whereas, This "Institute on Public Health Economics" included subjects covering medical economics presented from the viewpoint of public health professors and administrators; and

Whereas, The Medical School of the University of Michigan was not a joint sponsor and did not officially coöperate with the School of Public Health in this endeavor which covered activities intimately associated with the practice of medicine; and

Whereas, The question arises whether the School of Public Health of the University of Michigan is developing along lines divergent from the course pursued by the School of Medicine with the possible eventual view of making the School of Medicine subservient to the School of Public Health in the field of medical education; therefore, be it

Resolved, That the Michigan State Medical Society request of Alexander G. Ruthven, President of the University of Michigan, a statement describing the aims and purposes of the School of Public Health of the University of Michigan and a declaration as to the relationships between this new School of Public Health and the School of Medicine; and be it further

Resolved, That the Michigan State Medical Society further request the President of the University of Michigan that he suggest to the Dean of the School of Medicine and to the head of the Postgraduate School of Medicine of the University of Michigan that any and all courses or institutes in medical education, including economics, be directed by the School of Medicine of the University of Michigan and the School of Postgraduate Medical Education and that the Michigan State Medical Society offer its help and coöperation to the University of Michigan in this important and necessary work.

Mr. Speaker and Gentlemen, upon instructions of my County Society, Genessee, and by their direction, the following two resolutions are introduced:

VIII-4. RESOLUTION TO CHANGE THE FORM OF MICHIGAN MEDICAL SERVICE

Whereas, The Council of the Michigan State Medical Society has requested that the doctors of the State of Michigan do not coöperate with the Federal Medical Maternity Care plan as now administered by the Child Welfare Bureau of the United States Department of Labor, and

Whereas, One of the main objections, as stated by The Council to the physicians of the State of Michigan and released to the public press thereof, was given as the fact that said Federal plan subsidized the physician for services rendered and did not pay the patients directly for anticipated maternity care, and

Whereas, Such a scheme of medical service rendered to the patient, with subsidization of the doctor therefor, is identical with the plan of the Michigan Medical Service as adopted and set up by the House of Delegates of the Michigan State Medical Society, and

Whereas, The Child Welfare Bureau of the United States Department of Labor has now adopted this policy, and

Whereas, The Council of the Michigan State Medical Society, now opposes said principles of subsidization of the physician, and

Whereas, The plan of the Michigan Medical Service, as now constituted, is a direct negation of the Council's present attitude toward Federal subsidization of doctors of medicine as expressed by them editorially in the Michigan State Medical Society Journal, by letters to physician members of the Michigan State Medical Society, and to the public through press releases, therefore, be it

Resolved, That the House of Delegates of the Michigan State Medical Society does hereby instruct and require those members of the Michigan State Medical Society who constitute a majority of the Directors of the Michigan Medical Service to, individually and collectively, immediately take such steps as are necessary to change the Michigan Medical Service from a type of service organization to a medical insurance corporation; whereby indemnities may be paid directly to the patient policyholder on a partial indemnity basis and not paid as direct subsidy to the physicians of the State of Michigan.

VIII-5. RESOLUTION TO LIMIT MICHIGAN MEDICAL SERVICE TO DOCTORS OF MEDICINE

Whereas, The Michigan Medical Service was initiated and established by action of the House of Delegates of the Michigan State Medical Society, and

Whereas, One of the major benefits to be derived therefrom and one of the leading arguments that was instrumental in its establishment was the stated fact that services under Michigan Medical Service would be rendered by Doctors of Medicine only, and no other, and

Whereas, The Enabling Act of the State of Michigan No. 108 of the Michigan Public Acts of 1939, as amended, by authority of which Michigan Medical Service was established, states plainly that services shall be rendered by Doctors of Medicine only,

Whereas, The Michigan Medical Service, a corporation created by the Michigan State Medical Society, did seek and obtain from the Attorney General of the State of Michigan an ambiguous ruling which purports to permit of payment for services rendered certificate holders of Michigan Medical Service to practitioners other than Doctors of Medicine, and

Whereas, The Michigan Medical Service has in the past and is at the present time paying practitioners other than Doctors of Medicine for services rendered to its certificate holders, and

Whereas, Specific approval has never been sought nor obtained from the House of Delegates of the Michigan State Medical Society, the creators of Michigan Medical Service, for this radical change in the policy approved at the time it was established, and

Whereas, The majority of the Directors of Michigan Medical Service are also members of the Michigan State Medical Society, therefore, be it

Resolved, That it is the sense of the House of Delegates of the Michigan State Medical Society, at their annual meeting in Detroit, September 20, 1943, that Michigan Medical Service shall cease and desist from paying any further monies or equivalent thereof to any practitioner other than legally licensed and registered Doctors of Medicine, and further be it

Resolved, That those members of the Michigan State Medical Society who are Directors of the Michigan Medical Service and who constitute a majority of the Directors thereof, are hereby instructed and required, individually and collectively, to take such action as Directors of Michigan Medical Service, as to fully comply with the above instructions of the House of Delegates of the Michigan State Medical Society.

The Speaker: All of these resolutions will be referred to the Resolutions Committee.

G. L. McClellan, M.D. (Wayne): Mr. Speaker, on behalf of the Wayne County Medical Society, which has endorsed the following resolution through its Council, I present it for your consideration.

VIII-6. RESOLUTION TO DECLARE MEDICAL POLICIES

Resolved, That the House of Delegates of the Michigan State Medical Society in annual meeting assembled,

First, approve the text of the display card pledging nonsupport of a state medical bureaucracy, and of the blanks to be signed, pledging nonacceptance of medical regimentation, together with accompanying leaflet of facts;

Second, that the Executive Office of the State Society see that copies of these be sent to all county societies urging their distribution and use;

Third, that the Executive Office of the State Society send copies to all other state societies asking for support and cooperation.

The Speaker: This report will be referred to the Resolutions Committee.

Henry A. Luce, M.D. (Wayne County): Mr. Speaker, Members of the House of Delegates, Ladies and Gentlemen, Honored Guests: This resolution that I am about to introduce was drafted by a subcommittee of the Wayne Delegates, and has been approved by the Council of the Wayne County Medical Society.

VIII-7. RESOLUTION TO IMPROVE PUBLIC RELATIONS

Inasmuch as ninety per cent of the Doctors of Medicine contacted expressed it as their opinion that an appropriate office be established for distribution of factual material relative to medical care and public health, and

Inasmuch as it appeared that the National Physicians' Committee was in accord with this idea until influenced by certain members of the American Medical Association at the last meeting of the House of Delegates, and

Inasmuch as a lack of helpful interest by the directing powers of the Executive Office of the A.M.A. has been deplored by citizens and legislators alike, and

Inasmuch as it is our opinion that the personal interest and welfare of the Executive Office of the A.M.A. appears to have

taken precedence over the interest of the public health and welfare of physicians, therefore be it

RESOLVED, That we declare for the establishment of a central educational office in Washington, D. C., for the distribution of pertinent and factual medical information, and be it further

RESOLVED, That the Executive Committee of the Michigan State Medical Society be instructed to contact all other State Medical Societies for the purpose of implementing this objective.

THE SPEAKER: This resolution will be referred to the Committee on Resolutions.

IX-9. MEMBERSHIP FOR PHYSICIANS TEMPORARILY RETIRED

C. E. DUTCHESS (Wayne): Proposed amendment to the Constitution of the Michigan State Medical Society, Article III, Section 4, Item 4.

Amend the first paragraph to read as follows:

Physicians not engaged in any phase of medical practice, including members not in practice due to protracted illness.

MR. SPEAKER: This will be referred to the 1944 House of Delegates

IX-10. QUALIFICATIONS FOR MEMBERSHIP

Proposed amendment to the By-laws of the Michigan State Medical Society.

Amend Chapter 9, Section 3, by replacing the first sentence with the following sentence: "Each county society shall be the judge of the qualifications of its own members; but, as such societies are the only portals to this Society and to the American Medical Association, every reputable practitioner of medicine who meets the requirements specified in the Constitution, Article III, Section 2, shall be eligible to active membership.

THE SPEAKER: This will be referred to the Reference Committee on Amendments to the Constitution and By-laws.

VIII-8. SPECIAL MEMBERSHIPS

C. F. BRUNK, M.D. (Wayne): This resolution has been approved by the Council of the Wayne County Medical Society.

RESOLVED, That the following two physicians, both of whom are Honor Members of the Wayne County Medical Society, be elected to Emeritus Membership in the Michigan State Medical Society:

Robert L. Schorr, M.D., 1326 Jefferson Avenue East, Detroit, Michigan. Dr. Schorr was born in 1873 and was graduated from the Detroit College of Medicine and Surgery in 1893.

Otto T. Toepel, M.D., 195 Grand Boulevard East, Detroit, Michigan. Dr. Toepel was born in 1870 and was graduated from the Detroit College of Medicine and Surgery in 1893.

Both of these gentlemen have distinguished themselves and the profession during many years of loyal and creditable service to the science of medicine and to humanity.

THE SPEAKER: This resolution will be referred to the Reference Committee on Resolutions.

VIII-9. RESOLUTION RE TAXES ON MEDICAL HOMES

T. K. GRUBER (Wayne): Mr. Speaker and Members of the House of Delegates: The first resolution has not been directly approved by the Council of the Wayne County Medical Society. However, I was instructed by a letter from Dr. Walker, the Chairman of the Wayne Delegation, to prepare the resolution and present same.

WHEREAS, Various County Medical organizations and the Michigan State Medical Society are desirous from time to time of having a permanent home and headquarters, and

WHEREAS, In times past the State and the political subdivisions of the State have not assessed taxes against homes and headquarters of certain medical organizations in this State, and

WHEREAS, Organizations other than medical organizations that are not organized for profit are desirous from time to time of obtaining and holding homes, offices or headquarters, and

WHEREAS, The laws of the State of Michigan at the present time are not clear on the subject of taxes for homes, offices or headquarters of medical and certain other organizations, not organized for profit, be it

RESOLVED, That the Council of the Michigan State Medical Society be instructed to proceed, in conjunction with any County Medical Societies interested in the premise above mentioned, to have introduced into the legislature of the State of Michigan legislation which would clarify the situation and relieve medical organizations from taxes on homes, offices or headquarters which they might own and, be it further

RESOLVED, That the Michigan State Medical Society and any County Medical Society joining with them in preparation and introduction of a bill to clarify this tax situation, be authorized to contact and coöperate with any and all organizations in the State of Michigan that might be interested in having taxes eliminated from the headquarters, offices or home in which the organization may be housed.

The next resolution was approved by the Council of the Wayne County Medical Society.

VIII-10. A RESOLUTION TO CHANGE THE STRUCTURE AND ENLARGE THE FIELD ACTIVITIES OF THE AMERICAN MEDICAL ASSOCIATION

WHEREAS, Medical associations and societies in the United States are organized under the provisions of a charter as laid down by the various state laws for organizing such groups, and from a perusal of these charters it appears that under the purposes set forth such organizations are for the sole purpose of carrying on charitable, educational and scientific endeavor, and

WHEREAS, The advice received at present, at least is to the effect that neither the American Medical Association nor any of its component societies (State and County) under present charters have any right whatsoever to engage in economic or political activities but have only the right to engage in such activities as set forth above, and as stated in the provisions of the laws under which these organizations are incorporated, and

WHEREAS, The American Medical Association is at present exhibiting a most decidedly defeatist attitude because of these provisions and is exhibiting this attitude principally expressed as because of fear of taxation, and other fears, and

WHEREAS, The practitioners of medicine who pay dues to these various medical organizations and support them, including the American Medical Association and each of its component societies, desire that these medical organizations in addition to the above set forth objectives, concern themselves with economic and other aspects of medicine as well, and

WHEREAS, It would seem proper to change the complexion of the organizational setup for medical associations and societies so they might be eligible to engage in other than scientific, educational and charitable endeavor and to pay taxes, which might require the raising of dues or whatnot, the above suggested change would attain a free and untrammeled position for them in the political and economic structure of these United States of America so that the medical associations and societies, local, state and national, may assume their place as a force for the benefit of the practitioner as well as the benefit of the patients they serve, realizing that good medicine depends on freedom from fear, at least (which is one of the great freedoms recognized in the Atlantic Charter), this fear being fear of persecution under the existing setup, be it, therefore,

RESOLVED, That an appropriate resolution be prepared for presentation to the House of Delegates of the American Medical Association, demanding that the organizational setup of organized medicine be so changed and amended as to permit of economic and political activities being carried on by the American Medical Association as well as by its component societies (state and county), and be it further

RESOLVED, That the American Medical Association be instructed to, if necessary, pay taxes whatever may be assessed, and, be it further

RESOLVED, That appropriate steps be taken to provide the necessary fiscal readjustment, and be it further

RESOLVED, That this action be officially presented by the Delegates from the State of Michigan to the House of Delegates of the American Medical Association at its next meeting, and be it further

RESOLVED, That a copy of this action be forwarded to each State Medical Society in the United States with an appropriate letter of transmittal, and be it further

RESOLVED, That a copy of this action be forwarded to each member of the House of Delegates of the American Medical Association, and to each member of the Board of Trustees of the American Medical Association.

THE SPEAKER: This resolution will be referred to the Reference Committee on Resolutions.

G. L. MCCLELLAN (Wayne):

VIII-11. RESOLUTION TO IMPLEMENT A CAMPAIGN FOR PUBLIC INFORMATION ON MEDICAL CARE BY AN ASSESSMENT

WHEREAS, It appears that the public has not been sufficiently informed as to the true motives behind certain movements to change the system of medical care, nor of the deterioration in medical service that will result if such movements materialize; therefore be it

RESOLVED, That the membership of the Michigan State Medical Society be assessed $10.00 per capital for educational purpose during this present year.

THE SPEAKER: This resolution will go to the Reference Committee on Resolutions.

VIII-8. SPECIAL MEMBERSHIPS

A. T. Hafford, M.D. (Calhoun):

Whereas, Dr. Starr K. Church, a respected member of the Calhoun County Medical Society, is seventy-six years old and has been in active practice for fifty-one years, and

Whereas, The Calhoun County Medical Society has voted that he be made a member emeritus, be it

Resolved, That Dr. Starr K. Church be elected a member emeritus of the Michigan State Medical Society.

The Speaker: That will go to the Reference Committee on Resolutions.

VIII-12. RESOLUTION RE HOSPITAL LICENSING ACT

L. G. Christian, M.D. (Ingham): Mr. Speaker, I have two resolutions, which will implement and endorse the report of the Council of the State Society.

Whereas, An urgent need for improvement in hospital standards exists in this State, according to the Michigan Hospital Association, and

Whereas, This improvement in hospital standards would be accomplished by the enactment of the Michigan Legislature of a Hospital Licensing Act, therefore, be it

Resolved, That the House of Delegates of the Michigan State Medical Society approve in principle the enactment of a Hospital Licensing Act in Michigan to improve hospital standards.

VIII-13. RESOLUTION RE A.M.A. BUREAU OF INFORMATION

Whereas, In the solution of the problems of organized medicine, local, state and national legislators need the advice and counsel of Doctors of Medicine who are in private practice; and

Whereas, Such advice and counsel have been provided to the members of the Michigan Legislators by the Michigan State Medical Society at the State Capitol at Lansing; and

Whereas, Such assistance at the State Capitol has been welcomed and helpful to the members of the Michigan State Legislature according to their own statements; and

Whereas, A great number of delegates to the American Medical Association representing states on the Atlantic Coast, the Middle West, Far West, and the Pacific Coast, introduced resolutions in the House of Delegates of the American Medical Association in June, 1943, to establish such a bureau of information in the National Capitol at Washington, D. C., to provide such information as had proven helpful in the several state legislatures; therefore, be it

Resolved, That the House of Delegates of the Michigan State Medical Society instruct its delegates to the American Medical Association House of Delegates to support and fight for the principles enunciated by the several states in resolutions which were aimed to establish in Washington, D. C., a bureau of information to aid members of Congress in order to defeat attempts to lower the standards of the practice of medicine in the United States.

The Speaker: That will go to the Committee on Resolutions.

VIII-8. SPECIAL MEMBERSHIPS

D. Bruce Wiley, M.D. (Macomb): I have been instructed to present the following resolution to the House of Delegates:

Whereas, *Joseph M. Croman, Sr., M.D.,* of Mt. Clemens, a member of the Macomb County Medical Society, began the practice of medicine in 1892 and has conducted an ethical practice of medicine in Michigan for over fifty years, and

Whereas, Joseph M. Croman, Sr., M.D., has been a member of the Michigan State Medical Society in good standing since 1906, therefore, be it

Resolved, That the Macomb County Medical Society wishes to present to the House of Delegates of the Michigan State Medical Society at its 1943 meetings, the name of Joseph M. Croman, Sr., M.D., of Mt. Clemens for Emeritus Membership in the Michigan State Medical Society.

The Speaker: That will be referred to the Reference Committee on Resolutions.

Are there further resolutions?

If not, we will go on to reports of Standing Committees.

XI. Reports of Standing Committees

The Speaker: Has any Committee a supplementary report?

If not, the reports of the following committees will stand as written in the Handbook.

XI- 1. LEGISLATIVE COMMITTEE
XI- 2. COMMITTEE ON DISTRIBUTION OF MEDICAL CARE
XI- 3. JOINT COMMITTEE ON HEALTH EDUCATION
XI- 4. MEDICAL-LEGAL COMMITTEE
XI- 5. PREVENTIVE MEDICINE COMMITTEE
XI- 6. CANCER CONTROL COMMITTEE
XI- 7. MATERNAL HEALTH COMMITTEE
XI- 8. SYPHILIS CONTROL COMMITTEE
XI- 9. TUBERCULOSIS CONTROL COMMITTEE
XI-10. INDUSTRIAL HEALTH COMMITTEE
XI-11. CHILD WELFARE COMMITTEE
XI-12. IODIZED SALT COMMITTEE
XI-13. HEART AND DEGENERATIVE DISEASE COMMITTEE
XI-14. POSTGRADUATE MEDICAL EDUCATION COMMITTEE
XI-15. PUBLIC RELATIONS COMMITTEE
XI-16. ETHICS COMMITTEE
XI-17. MENTAL HYGIENE COMMITTEE

These reports will be referred to the Reference Committee on Standing Committees.

XII. Reports of Special Committees

We will go on now to the reports of Special Committees.

XII-1. CONFERENCE COMMITTEE ON PRE-LICENSURE MEDICAL EDUCATION
XII-2. PROFESSIONAL LIAISON COMMITTEE
XII-3. POSTGRADUATE EXTENSION COMMITTEE
XII-4. RADIO COMMITTEE
XII-5. COMMITTEE ON MEDICAL PREPAREDNESS (name changed to "Committee on Procurement and Assignment of Doctors of Medicine")
XII-6. COMMITTEE ON NURSES TRAINING SCHOOLS
XII-7. ADVISORY COMMITTEE TO WOMAN'S AUXILIARY
XII-8. BEAUMONT MEMORIAL COMMITTEE

These reports will be referred to the Reference Committee on Special Committee Reports. They will stand as in the Handbook.

Dr. Urmston of Bay County, Chairman of the Medical Preparedness Committee, has a supplemental report.

SUPPLEMENTAL REPORT OF MEDICAL PREPAREDNESS COMMITTEE

As this is a War Conference you will be interested in the status of all doctors remaining in Michigan. At all earlier reports pertaining to the status of doctors of Medicine in Michigan, I have added the statement, "If an emergency arises, your status will be changed." There is still a war going on and an emergency has

arisen requiring more doctors in the Armed Forces. While the quota for 1943 is 11,000 doctors for the Armed Forces, an additional 6,000 are required before the end of 1943. Do not become alarmed, as there are no quotas for any of the states as the quota system has been a draw-back rather than an aid to the Procurement and Assignment. especially in certain states. Procurement and Assignment will meet the needs of the Armed Forces and home requirements as in the past. Influx and increase in population are well known in certain areas, and we will not have to meet these emergencies as before. Employment is almost at its peak, and while some areas require more workers, those are usually cared for by relocation. The status of the doctors of Medicine in Michigan is wide open. and all M.D.'s who have applied for commission and were rejected for some minor physical disability will again be reviewed if they are not essential to their communities. Michigan will be required to furnish more doctors above those commissioned so far in 1943, but they will be selected with care so that no community will be depleted. We have plenty of doctors under thirty-eight who should be commissioned, but until we get volunteers or some directive forcing the intern or resident who has been disqualified physically to replace these under thirty-eight in the smaller towns so that they may offer their services, we will not be able to do our part in supplying the needs of the Armed Forces.

Critical Areas

At the end of 1942 and in the early part of 1943, much was written about the shortage of doctors in Michigan, especially in the west end of Wayne County, the Soo, and other areas where the population was small and the doctor either died or left for the Armed Forces. We have relocated forty-seven doctors in these areas, as shown in the accompanying list.

NAME	RELOCATED TO	FROM	AGE
Clements, F. W.	Eaton Rapids	Interlochen	76
Weitz, Harry	Traverse City	Military Com.	34
Kaye, A. H.	Ludington	New York City	56
Paukstis, G. A.	Ludington	Military Com.	36
Slade, H. G.	Roger City	Onaway	34
Rasmussen, Leo	Vicksburg	Military Com	29
Cobb, Thomas H.	Oakland	Bay City	38
Ramseyer, G. E.	Delton	Plainwell	42
Hostetler, Carl M.	Oscoda	Owosso	31
Rhind, Earl S.	Soo	St. Ignace	38
Harrington, H. M.	Soo	E. Jordon	55
Hagalee, Marie	Soo	Lansing	37
Lynn, Harold P.	Townsite	Ypsilanti State Hosp.	31
Burdick, Jesse G.	Fennville	Chatanooga, Tenn.	25
Haas, Reynold	University of Michigan	Commission	30
Carr, Edward S.	Soo	Midland	24
McDonald, Allan	Mackinac Island	Detroit	67
Corkill, C. C.	White Pigeon	Menominee	47
Siler, Delbert E.	Bay City Dow Chem.	Wyoming	35
Berghorst, John	Traverse City	Detroit	38
Wiersma, Silas C.	Muskegon	Hudsonville	37
Hickey, Thomas C.	Gwinn	Kankakee, Ill	36
Lane, Edwin C.	Willow Run	Mallory, W. Va.	38

Those from Wayne

NAME	RELOCATED TO	FROM	AGE
Jamieson, T. J.	Lincoln Park	Muncie, Ontario	47
Silver, I. W.	Lincoln Park	Woman's Hospital (left)	28
Palm, George W.	Lincoln Park	Prudenville	54
Bass, Thomas J. (Colored)	River Rouge	Howard Univ. Washington, D.C.	33
Potter, Marcia L.	Northville	Detroit	36
Ujda, Charles J.	Wayne	Harper Hosp. Detroit	28
Allen, John V.	Lincoln Park	Military Comm.	32
Manning, John E.	Chrysler Motor	Military Comm.	35
Kline, Lewis LeRoy	Chrysler Motor	Military Comm.	29
Petix, Samuel C.	N. District, 8 mile Road, and Oakland	Detroit	35
Clark, Ronald E.	Wayne	Eloise Hospital	31
Grillo, Phillip S.	Belleville	Industrial Clinic Detroit	32
De Ponio, Sylvester	20249 Van Dyke Detroit	Grace Hospital	36
Capano, O. A.	Lincoln Park	Dr. Gariepy	31
Bates, Morton P.	Wayne	Highland Park Gen. Hospital	31
Carter, John R.	Wayne	Toledo	62
Lawrence A. Comstock	Trenton	Wyandotte Hospital	33
Dryer, Clyde K.	Wayne Housing Project	Evangelical Deaconess	29
Lieber, Robert W.	Wayne Housing Project	Evangelical Deaconess	33
Watson, W. Young (Colored)	Inkster	Kirwood Hospital Detroit	28
Swickle, Edward F.	Royal Oak	Highland Park General Hospital	33
Koehler, W. H.	Royal Oak	Woman's Hospital	32
Margolis, Frederick	Kalamazoo	Herman Kiefer Hosp.	28
Wellman, W.	Townsite	Detroit	39

This leaves only twelve communities in which the doctor moved from one town to another previous to the freezing of doctors, or in areas where, under our present volunteer system, it is impossible to get a doctor to relocate as living quarters and income are poor and it would be a sacrifice on the part of the doctor. In many of these smaller localities there has been an influx of those practicing the healing art who are protected by the Selective Service, and the communities are taken care of as well as possible under the circumstances.

AREAS LACKING ADEQUATE MEDICAL CARE

TOWN	COUNTY
New Baltimore	Macomb
Gladwin	Gladwin
Levering	Emmet
Tekonsha	Calhoun
Britten	Lenawee
Tecumseh	Lenawee
Oscoda	Iosco
Byron	Shiawassee
Ontonagon	Ontonagon
Willow Run	Washtenaw
Jackson Prison	Jackson
Marcellus	Cass County

Survey

Many surveys were made jointly by the U. S. Public Health Service and the Procurement and Assignment Service in cities where reports have indicated there was a shortage of doctors. Some of the reports were false, and in other cases the shortage was due to increase in population. Six surveys were made: At Ypsilanti, Sault Ste. Marie, Muskegon, Eaton Rapids, Blissfield and Mio, and Standish.

The Soo was the number one town for aerial attack by the enemy. The result of the survey indicated that we have taken seven doctors from the Soo, for the Armed Forces. One moved to California. There were eighteen doctors in the Soo. We have made seven replacements, and the total number of doctors in the Soo is seventeen. This leaves them only one short of normal times. It is regretted that Current magazines of National reputation should publish articles as did *The Ladies Home Journal* in the September issue. This article was written from data obtained in February, 1943. Our office was informed and a letter was written to the Soo doctors on February 13, 1943, that such an article would be published, and we asked them to give adequate information as to the status of all doctors present. When this article was published, they did not appendix it with the statement that the Soo now is receiving adequate care. Is this only propaganda on the part of the publishing companies to keep the citizens of the State of Michigan in a state of hysteria in the belief that the American system of Medicine is not adequate?

Members of the committee have been assigned to write certain headings for this report, and I will quote you as they have written:

Dr. Milton Darling: In addition to assisting the government in recruiting physicians for the armed forces your committee also has been fully cognizant of the medical needs of the civilian population. The problem has been complicated by the enormous influx of war workers in congested industrial areas. As explained elsewhere in this report, the medical needs in these critical areas have been met by assigning some new doctors and relocating others.

Of the approximate six thousand physicians in this state, more than one-third have already entered the military service. Therefore, on less than four thousand physicians rests the medical care of the entire civilian population of the state. However, your committee feels that the civilian population is reasonably protected unless the military authorities make further demands for medical personnel.

Lt. Col. I. Owen: The Medical Preparedness Committee of the Michigan State Medical Society has had most excellent coöperation from the Officer Procurement of the Armed Forces, both Army and Navy, and with Selective Service. The Officer Procurement Offices have been prompt in reporting applications to the Procurement and Assignment Service.

It must be remembered that the Procurement and Assignment Service is a doctors' program to allocate doctors to the Armed Forces and to the civilian communities. It is urged, therefore, that doctors coöperate to the fullest extent with the Procurement and Assignment Service so that there can be no criticism of the medical profession in its relationship to the war effort. To date there has been no criticism because doctors in general have coöperated greatly with the Procurement and Assignment Service. At the present writing less than twenty-five names have been sent to Selective Service as failing to apply for commissions when advised to do so by the Procurement and Assignment Service. A goodly number of these cases has proven to have unusual dependency situations.

Within the next few months the recruiting of doctors will be resumed because of the severe deficiency in the Armed Forces at the present time. As a result of this we trust that doctors chosen by the Procurement and Assignment Service to apply for commissions will be willing to go into the Armed Forces so that their names will not have to be turned over to Selective Service for processing.

Dr. C. D. Moll: In the recent past two or three months there have been indications that more doctors will have to be furnished to the armed forces by the end of the year. In spite of the fact that Michigan has over subscribed its quota for this year, it is obvious that there are a few who will have to be made available for the various services. Through the very fine coöperation of the Officer Procurement Service of the Army and the Navy and the Selective Service and Procurement and Assignment Service, this can be done. Of course, Procurement and Assignment is charged with the duel function of supplying doctors for the armed service and at the same time maintaining adequate supply on the home front for civilian medical care. Obviously P and A, literally speaking, is in the middle and thoughtful consideration must be and is being given to these two functions. The latter is just as important as the former, and the P and A Service definitely recognizes its responsibility in this respect.

As has been previously indicated a number of men have been relocated in the critical areas in the State, and whenever and wherever additional shortages make themselves felt, they will be given prompt consideration by the P and A service, at the same time not shirking its responsibility of supplying doctors for the armed forces. It is obvious that if we do not do it the Army and Selective Service will take it out of our hands and do it themselves.

Carrying out these plans has called for smooth cooperation between the various offices, Procurement Service, Selective Service, and the Procurement and Assignment Service in this state. This coöperation has reacted to mutual benefit of all concerned and with continued coöperation we are certain that we can strike a happy balance between our two important functions, namely, supplying doctors for the Armed Forces and also maintaining adequate medical care on the home front.

Note: This is just a brief memo of some ideas for your report to the House of Delegates.

* * *

The problem of today is not the furnishing the Army with the officers needed, but those in the Army who have been retired to civilian life due to physical disqualifications. The numbers are increasing, and we expect these doctors to return to their original locations. In many instances the doctor had a replacement and agreement for the duration, so some must seek other locations if they are discharged from the Service previous to the ending of the War. We have asked each county Procurement and Assignment Committee to ascertain the needs of their communities so that these men can be located there for the duration. Many doctors of other states have heard about the shortage of doctors in Michigan, and constantly apply for relocation in Michigan. The policy of this office has been that if a doctor has a license to practice in Michigan,

he can easily be returned to useful practice in Michigan; but those who wish to enter the state without a Michigan license are required to meet the rules of the State Board of Registration in Medicine and must be in good standing in their local, county, and state societies, and members of the American Medical Association. In this way we will keep the standards of the practice of Medicine on a high level in Michigan. There is also the problem of the physically unfit intern and resident who must be relocated. We are asking all of these to be assigned through Procurement and Assignment so that there will be no over-crowding in certain areas.

The doctors left in each community are willing to work harder and are showing the proper spirit in appreciation of those in the service and will sacrifice themselves so that the men in the Service may return to their towns and pick up the practice they left. This coöperation is made possible by the American plan of Medicine and the close association of doctors of Medicine.

In 1940 this Committee was called the Medical Preparedness Committee, and has been carried as the Medical Preparedness Committee for two years. Procurement and Assignment Service for Physicians is now under the War Manpower Commission, and all County Committees are so designated now. It would be less confusing if it was changed to the Procurement and Assignment Service of Physicians in the future, and I so recommend that this change be made at this meeting.

Thanking you for your attention, I remain,

Yours respectfully,

P. R. Urmston, M.D., *Chairman*
F. G. Buesser, M.D.
L. Fernald Foster, M.D.
C. D. Moll, M.D.
H. H. Reicker, M.D.
C. I. Owen, M.D.
Milton Darling, M.D.

The Speaker: This report will be referred to the Reference Committee on Special Committee Reports, and in referring this report, I would like to call attention to the tremendous amount of work Dr. Urmston has done. He deserves very great credit.

This winds up our work for tonight.

I would like to make one or two announcements. We will expect all the Reference Committees, with the exception of the Resolutions Committee, to have their work completed by ten o'clock tomorrow morning.

Commissioner Moyer of the State Department of Health will be here at ten o'clock tomorrow morning to answer questions on the obstetric-pediatric program. If you have any questions have them ready.

(The session recessed at eleven forty-five o'clock.)

(Concluded in January issue)

COUNTY SOCIETY MEETINGS

The MSMS Committee on Industrial Health will sponsor during January three talks by O. J. Johnson, M.D. of the AMA Bureau of Industrial Health:

1. Hillsdale County Medical Society—Dinner meeting at 6:30 p.m., January 4—Hillsdale Community Hospital—G. F. Moench, M.D., Chairman of Program Committee.

2. Joint Meeting of the Eaton County Medical Society and the Barry County Medical Society at Hastings—Dinner meeting at 6:30 p.m., January 6—H. S. Wedel, M.D., Secretary of the Barry County Medical Society.

3. Meeting with the St. Clair County Medical Society—Hotel Harrington, Port Huron—January 11, Dinner meeting at 6:30 p.m.—A. L. Callery, M.D., Secretary of the St. Clair County Medical Society.

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AMA EXHIBIT

The Scientific Exhibit at the Chicago Session of the American Medical Association, June 12-16, 1944, will be held at the Palmer House. Exhibits will cover all phases of medicine and the medical sciences with particular emphasis on graduate medical instruction for the physician in general practice.

Application blanks for space in the Scientific Exhibit are now available and may be obtained by communicating with the Director, Scientific Exhibit, American Medical Association, 535 N. Dearborn Street, Chicago 10, Illinois.

WAYNE ACQUIRES HOOKER LIBRARY

The Kresge Foundation has granted to Wayne University the sum of $100,000 for the establishment there of an important scientific library, according to Dr. David D. Henry, executive vice-president of the University. Together with an equal amount contributed by interested organizations and individuals, the grant will be used to purchase and modernize the world-famous Hooker Scientific Library, now located at Central College, Fayette, Missouri. At Wayne the collection will be known as the Kresge-Hooker Scientific Library.

The project to bring the Library to Detroit and to enlarge it was carried out by a committee of scientists and industrial leaders in collaboration with Dr. William W. Whitehouse, dean of the College of Liberal Arts, and Dr. Neil E. Gordon, head of the chemistry department in that college.

The local committee, sponsored by the Detroit Section of the American Chemical Society, operated under the chairmanship of Dr. Harvey Milton Merker, of Parke, Davis and Company. Other members included: T. A. Boyd, of the General Motors Corporation; Dr. George Calingaert, of the Ethyl Gasoline Corporation; Dr. Icie Macy Hoobler, of the Children's Fund of Michigan; and Dr. Oliver Kamm, of Parke, Davis and Company.

Dr. Whitehouse sees the acquisition of the Library by the University as an accomplishment of major importance to Detroit. "The Hooker Library," he said, "built upon the basic collection of the noted scientist, Samuel C. Hooker, is not only recognized as one of the world's most complete collection of books and journals on chemistry, but is also of great value to the related sciences and to engineering. It is widely used by research scientists in all parts of the United States who utilize the reference and translation services supported by the Friends of the Hooker Scientific Library. It is quite fitting that this fine technical collection be located in this great industrial community."

Concerning the specific use to which the Library will be put, Dr. Gordon said, "The research services of the Library will be of direct value to both the academic and industrial research interests in this area. It will also provide a library for the training of chemical bibliographers and research librarians". The national reference and translation services maintained by the Library will be continued here, he indicated.

WEST VIRGINIA SPEAKS

The following comes from the West Virginia State Medical Association President's letter to its membership:

Some doctors have received a letter from the director of District No. 22, United Steel Workers of America, Huntington, with reference to the Wagner-Murray-Dingell bill (S. 1161), which in substance is as follows:

"Enclosed is an outline of the Wagner-Murray-Dingell Social Security Act.

"The workers of this nation are generally in favor of this Act and have expressed their approval through resolutions in the various organizational conventions to which they belong.

"The organized opposition to this Act comes almost wholly from the organized medical profession and it is our purpose in writing you to determine whether or not the fight which is being led by the heads of your organization represent the wishes of your members generally.

"If you favor this legislation, the workers in this community would appreciate your indicating such approval to either Senator Wagner at the Senate Office Building in Washington, D. C. or Mr. Van A. Bittner, 718 Jackson Place, Northwest, Washington 6, D. C."

This letter will more than likely be sent to every physician and I urge you to reply in an intelligent and constructive manner pointing out the things organized medicine is now offering the people of West Virginia at a price far below anything the government can offer, and without lowering the high standards of practice which would be inevitable under governmental control.

DOCTOR BILLS RISING, TOO

Over-all medical costs have risen 10 per cent in Lansing during the two years ended October 1, a survey by the Department of Labor and Industry disclosed, 14 per cent in Flint, 6 per cent in Saginaw, 2 per cent in Grand Rapids, and 7 per cent in Marquette.

Using Lansing prices as a sample, doctors are charging $2.50 per office consultation, $3.25 for a house call, $68.75 for an obstetrical case, $93.75 for an appendectomy and $36.25 for a tonsillectomy. Hospital ward costs are $4.375 a day, semi-private rooms $5 a day, private nurse $7 a day.

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Journal Michigan State Medical Society says:

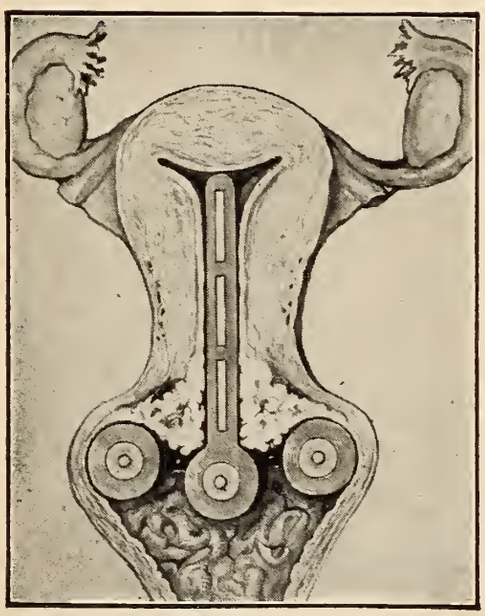
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Woman's Auxiliary

HOLIDAY GREETINGS

The officers of the Woman's Auxiliary to the Michigan State Medical Society extend to each member of the Auxiliary and all unaffiliated doctors' wives the season's greetings. War has caused us all to adopt new holiday plans. Let us retain for our children as many family customs as possible. For our doctors in service and their families who are temporarily located away from their County Auxiliaries, let us send greeting cards and letters to assure them we miss them and appreciate their sacrifices. For those of us whose husbands are with us but are harried by the burdens of overwork, let us renew our Convention resolution to make our homes their havens of rest.



Mrs. J. J. Walch,
President
1943-44

The officers extend thanks for the outstanding cooperation evidenced in the speedy translation into action of the Convention program for the year.

That the holiday season may bring you the greatest possible joy is the sincere wish of your officers.

Cordially yours,

Mary Nee Walch
President.

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PAST PRESIDENT'S MESSAGE

In looking back over the past year, it seems almost incredible that so many changes have been wrought in all our lives in so short a period of time. It was with a feeling of misgiving, that I assumed the duties of president of this organization a year ago. I firmly resolved to do my best to uphold the high standards of the Auxiliary, little dreaming that my life as an army wife would take me to distant parts of these United States, and that my greatest source of moral support, my husband, would be serving overseas in the heart of this world-conflict. Despite the weight of mental turmoil which we all carry with us these days, I have tried to keep the aims and ideals of this organization constantly before me as the tasks and responsibilities of the year gradually unfolded.

We have faced a new experience in our history as an organization, in that so many of our officers, chairmen and members have left to accompany their husbands who are now serving in the armed forces. To balance this loss, however, we have had many new members join our ranks. The war has brought with it an opportunity for the Auxiliary to take its place in the war effort of our Country, and we can review the year's achievements with a sense of accomplishment that will give us courage and confidence to face the future responsibilities awaiting us. Every program and activity throughout the state has been moulded into the war effort. Auxiliaries in the state have been working to their fullest capacity. Time does not permit the mentioning of all the individual projects that have been successfully launched, but I cannot refrain from highlighting a few which are typical of the work done all over the state:

One Auxiliary raised money to buy a Seeing Eye Dog for a blind soldier. Many sponsored the recruiting of nurses and provided necessary loans. One organized a hospital auxiliary to carry on the much needed work of a hospital unit; still another raised $531.00 to purchase equipment for a County Sanatorium. A notable achievement of one Auxiliary was the purchase of $500.00 worth of war kits, $375.00 in funds for medical and surgical relief to procure life saving equipment for men marooned at sea. Another sold $22,575.00 worth of war bonds in the Victory loan drive. Other auxiliaries had representatives on every War Service committee, entertained servicemen, and furnished servicemen's day rooms. These, as I said, are all typical of the varied and numerous activities throughout our State, and I shall let these few examples speak for the many others.

During the past year I have had the privilege of visiting many Auxiliaries, but due to the tire and gas rationing it has been impossible to visit as many as I would have wished. In lieu of traveling, News Letters were sent out several times in an effort to keep the counties bound together toward a united goal of achievement.

It was my privilege to attend the National Meeting in Chicago, at which session Michigan was commended on several occasions for its fine participation in aiding the Medical Society Legislation Committee in opposing the Chiropractor's Bill. This bill, I am happy to report, was defeated. Commendation was given us, too, for sponsoring *Hygeia* and for our success in launching the Radio Speech Contest on Tuberculosis.

Considering the accomplishments of the year and the winning of these favorable comments, I extend my thanks and appreciation to the many who have helped make this a successful year. Your records have been a source of pride to me and I make just one appeal to you now, that is that you continue the fine work you have so ably undertaken this year. Particularly do I urge the continuance of the Tuberculosis Speech Contest. Testimony as to the educational value of this contest is the fact that forty-six schools in thirty-three counties entered essays in this first year of the project. Also, I would stress the importance of maintaining the recruiting of nurses who are so vitally needed these

days, and the continuation of all war service activities. I know that these activities will continue to merit your fine efforts.

The poet-philosopher, Emerson, has said that around every circle another circle may be drawn, I like to think, now that our year's work is finished, that we have completed the year's circle. Now we shall lay it aside and join hands and hearts in a sincere effort to make next year's circle one that shall completely surround this year's accomplishments in every way. Toward the attainment of that goal, I pledge myself whole-heartedly.

Thank you.

Mrs. G. L. Willoughby.

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PRESENTATION OF PAST PRESIDENT'S PIN

In presenting this Past President's pin to our esteemed Mrs. Willoughby we wish to convey our sincere thanks for the admirable manner in which she supervised the erection of the seventeenth floor of our Woman's Auxiliary to the Michigan State Medical Society structure.

She is the first President in our history who has been obliged to execute her administrative duties in the midst of such unparalleled domestic confusion and heartbreak. The uncertainties of war have more than perturbed her, so that it is with the most heartfelt thanks that we extend to her our appreciation for the attention and services rendered us.

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INGHAM COUNTY

The Auxiliary to the Ingham County Medical Society met in the home of Mrs. Harold S. Willson, October 18, 1943.

Lieut. Col. T. P. Vander Zalm of the army medical corps, recently returned from the South Pacific area, was a guest speaker.

Mrs. Milton Shaw, Mrs. Harold Miller and Mrs. Carleton Dean reported on the auxiliary convention recently held in Detroit.

Serving the Auxiliary for the year are: Mrs. T. Bauer, president; Mrs. P. C. Strauss, vice president; Mrs. Bradford, secretary; Mrs. H. B. Weinburgh, treasurer; and Mrs. F. C. Drolett, auditor. Committee chairmen include Mrs. H. L. French, program; Mrs. C. P. Doyle, finance; Mrs. Darling, courtesy; Mrs. Shaw, membership; Mrs. H. A. Campbell, telephone; Mrs. Drolett, reservations; Mrs. H. J. Proll, social; Mrs. J. E. McIntyre, historian; Mrs. Christian, archives; Mrs. H. A. Miller, nurses education; Mrs. Carleton Dean, press and publicity; Mrs. R. S. Breakey, public relations; and Mrs. D. M. Snell and Mrs. Francis Jones, Jr., welfare.

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ST. CLAIR COUNTY

The Auxiliary to the St. Clair County Medical Society met for dinner October 12, 1943, at the Chateau in Port Huron.

Dr. T. E. DeGurse, councilor of the 7th district, informed the members concerning the Wagner-Murray-Dingell Bill, No. 1161.

Mrs. Galen Ohmart, state program chairman, was present and discussed the project of recruiting for the U. S. Cadet Nurses Corp.

Mrs. A. L. Callery reported on the Auxiliary convention in Detroit.

Officers and committee chairmen are: Mrs. Walter Boughner, president; Mrs. Frank Beck, president-elect; Mrs. Clyde Martin, vice president; Mrs. R. H. Campbell, secretary; Mrs. D. W. Patterson, treasurer; Mrs. Beck, program; Mrs. J. H. Burley, nurses education; Mrs. W. E. Hall, public relations; Mrs. Edwards, *Hygeia;* Mrs. K. C. Banting, press; Mrs. Henry Wass, bulletin; Mrs. A. L. Callery, organization; Mrs. E. C. Sites, war participation; Mrs. George Waters, historian; Mrs. Patterson, archives; Mrs. E. W. Meredith, courtesy; Mrs. Adrian Zemmer, legislation; Mrs. W. A. Schaefer, project; Mrs. Thomas social; and Mrs. C. Martin, telephone.

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MICHIGAN'S DEPARTMENT OF HEALTH

H. ALLEN MOYER, M.D., Commissioner, Lansing, Michigan

BLOOD FOR PLASMA

Residents of eight Michigan communities have given blood for processing into plasma since the state health department's traveling clinic started its statewide tour September 22. Communities visited by the clinic, through November 12, are Lansing, Dowagiac, Holland, Grand Haven, Cadillac, Big Rapids, Midland and Boyne City. Blood has been taken from approximately 1,500 donors.

The legislature made $20,000 available July 1 for purchase of processing equipment and operating expenses of the traveling clinic for a year. A physician and four nurses collect the blood in quarters furnished in each community by local Red Cross chapters. The Red Cross chapters register donors in their communities and also supply additional nurse personnel and operate canteen services.

Civilian Defense requirements have priority for the duration of the war on all stocks of processed plasma. The department laboratories in Lansing, where principal reserves will be held, also will set aside a supply sufficient to meet any conceivable need arising from a non-military catastrophe.

Communities where blood is furnished by donors also will set up blood plasma reserves, usually in hospitals, from which local physicians may obtain free plasma for treatment of patients in their charge. An accounting is kept of blood furnished in participating communities and local reserves will be determined and maintained on such basis.

FOOD PROCESSING RULES NOT RELAXED

No relaxing of regulations which govern the production, processing and handling of milk and food in Michigan is contemplated by the state health department, despite reductions in inspector forces. Declaring, "If such standards are necessary in peacetime, they are even more necessary in wartime," Commissioner Moyer reports:

"The state health department is receiving an increasing number of complaints about lack of cleanliness in food handling establishments. State and local health department inspectors are making every effort to check on complaints received.

"We realize that shortage of help can make it difficult to maintain high standards of cleanliness. But unless all food producers, processors and handlers act to guard the health of the consuming public, we are facing trouble.

"Many epidemic diseases are food-borne. Milk, especially, can harbor disease organisms. Only the insistence of consumers on the maintenance of regulations governing the production, processing and handling of milk can bolster the efforts of inspector forces."

FLUORINE IN WATER TO PREVENT TOOTH DECAY

Mouth conditions of Escanaba school children were studied during the week of November 8 as part of the effort to determine in what degree fluorine-bearing water may lessen tooth decay. Dentists from the state health department, U. S. Public Health Service and University of Michigan counted acid-forming bacteria which cause tooth decay in mouths of 550 children, age 12-14, in an annual check-up which began three years ago and may continue over another decade.

New wells supply Escanaba with water which contains .5 parts per million of fluorine in the natural state. Dentists know that fluorine, an element of the chlorine family, can lessen tooth decay.

The Escanaba study will afford comparisons of tooth conditions when fluorine is or is not present. It has been suggested that tooth decay may be controlled in some measure in future through the addition of fluorine to drinking water supplies.

INDUSTRY'S HEALTH PROGRAM

Industry's increasing demands for help in protecting the health of workers are expanding district offices of the state health department's Bureau of Industrial Hygiene in Grand Rapids and Pontiac. Requests have nearly doubled in the last six months and a second industrial hygiene engineer has been assigned to each of the two offices.

Bureau physicians and engineers have visited over 1,700 Michigan plants during the year and industry has spent $1,476,000 in carrying out recommendations for improvements in working conditions in factories. Over 90,000 workers have benefited from these improvements.

MARRIAGES DECREASING

Fewer marriages may be recorded in Michigan this year than in any like period since 1939, according to state health department figures. June marriages, this year, fell below five thousand for the first time since 1938, the total having been 4,910.

All-time high in Michigan marriages was registered last year, a total of 51,585. On the basis of six-month figures, this year, the 1943 total will drop below 40,000. In the first six months, this year, 19,881 marriages were recorded.

Decline in marriages this year is believed to reflect the steady transfer to military services of men from civil life.



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AMERICAN MEDICAL ASSOCIATION

COUNCIL ON MEDICAL SERVICE AND PUBLIC RELATIONS

A STATEMENT OF GENERAL POLICIES

Pursuant to carrying out the duties imposed on it by the House of Delegates, the Council has adopted the following general policies:

1. The Council on Medical Service and Public Relations recognizes the desirability of widespread distribution of the benefits of medical science; it encourages evolution in the methods of administering medical care, subject to the basic principles necessary to the maintenance of scientific standards and the quality of the service rendered.

It is not in the public interest that the removal of economic barriers to medical science should be utilized as a subterfuge to overturn the whole order of medical practice. Removal of economic barriers should be an object in itself.

It is in the public interest that the standards of medical education be constantly raised, that medical research be constantly increased and that graduate and postgraduate medical education be energetically developed. Curative medicine, preventive medicine, public health medicine, research medicine, and medical education, all are indispensable factors in promoting the health, comfort and happiness of the nation.

2. The Council through its executive committee and secretary shall analyze proposed legislation affecting medical service. Its officers are instructed to provide advice to the various state medical organizations as well as to legislative committees concerning the effects of the proposed legislation. It shall likewise be the duty of its officers to offer constructive suggestions to bureaus and legislative committees on the subject of medical service.

3. The Council approves the principle of voluntary hospital insurance programs but disapproves the inclusion of medical services in those contracts for the reasons adopted by the House of Delegates at the 1943 meeting.

4. The Council approves voluntary prepayment medical service under the control of state and county medical societies in accordance with the principles adopted by the House of Delegates in 1938. The medical profession has always been very much opposed to compulsory health insurance because (1) it does not reach the unemployed class, (2) it results in a bureaucratic control of medicine, and interposes a third party between the physician and the patient, (3) it results in mass medicine which is neither art nor science, (4) it is in-

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ordinately expensive, and (5) regulations, red tape and interference render good medical care impossible. Propaganda to the contrary notwithstanding, organized medicine in general, and the American Medical Association in particular have never opposed group medicine, prepayment or non-prepayment, as such. The American Medical Association and the medical profession as a whole have opposed any scheme which on the face of it renders good medical care impossible. That group medicine has not been opposed as such is evidenced by the fact that there are many groups operating in the United States which have the approval of the medical profession, and members of these groups are and have been officials in the national and state medical organizations. That group medicine is the Utopia for the whole population, however, is not probable. It may be and possibly is the answer for certain communities and certain industrial groups if the medical groups are so organized and operated as to deliver good medical care.

5. The Council believes that many emergency measures now in force should cease following the end of hostilities.

6. The Council believes that the medical profession should attempt to establish the most cordial relationships possible with allied professions.

7. There is no official affiliation between the American Medical Association and the National Physicians Committee. However, since it is the purpose of the National Physicians Committee to enlighten the public concerning contributions which American medicine has made and is making in behalf of the individual and the nation as a whole, it is the opinion of the Council that the medical profession may well support the activities of the National Physicians Committee and other organizations of like aims.

8. American medicine and this Council owe a responsibility to our colleagues who are making personal sacrifices to answer the call of the armed forces. Therefore, the Council expresses the desire to coöperate with the medical committee on postwar planning in order to assist our colleagues in reëstablishing themselves in the practice of medicine, and in the preservation of the American system of medicine.

J. W. Holloway, Jr., *Acting Secretary.*

AMERICAN MEDICAL ASSOCIATION
Bureau of Legal Medicine and Legislation
J. W. Holloway, Jr., Director

October 9, 1943.

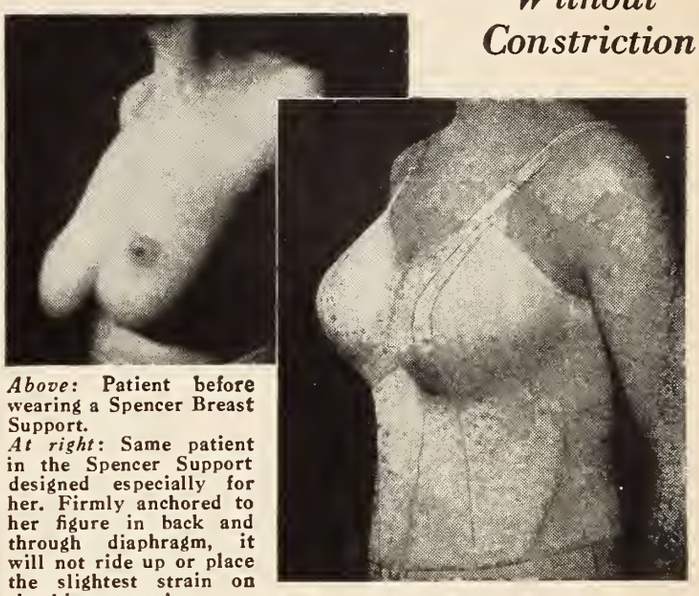
SPECIAL BULLETIN

Federal Funds for Relocation of Physicians

The President has transmitted to the Speaker of the House of Representatives supplemental estimates for the Public Health Service, amounting to $4,427,550. Of this sum, $2,350,000 will be used, it is proposed, for an extended program of malaria control, for the United States' share of a joint Anglo-American venereal-disease-control program for the protection of troops stationed in the Caribbean area, "and for the supplying by the Public Health Service, on request of State au-

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thorities, of needed medical and dental care, either by temporary financial aid or by direct employment of doctors and dentists, in certain critical areas where acute shortages have developed which cannot be met without recourse to emergency measures."

The transmitted estimates, pending in the House Committee on Appropriations, contain the following proviso:

"*Provided,* That the Surgeon General is authorized, on request of a State health department (1) to assign medical and dental personnel of the Public Health Service to areas found to be in critical need of additional medical and dental services, such services to be furnished the public in accordance with schedules of fees approved by the State health departments and the Surgeon General of the United States, which fees shall be collected by, and used at the direction of, the State departments of health, to defray the expenses thereof incident to the rendition of such medical and dental services, the balances at the end of the fiscal year to be covered into the Treasury as miscellaneous receipts, and (2) to enter into agreements with private practicing physicians and dentists under which, in consideration of the payment to them of a relocation allowance of not to exceed $250 per month for three months and the actual cost of travel and transportation of the physician or dentist and his family and household effects to the new location, such physician or dentist will agree to move to and engage in the practice of his profession in such area for a period of not less than one year."

No action is suggested at the present time. This matter will be given immediate consideration by appropriate committees of the Association.

(Signed) J. W. Holloway, Jr.

Editor's Note: The following extract from the committee's report rejecting the Budget request still contains a threat in the final paragraph:

"The committee in rejecting the Budget request does not minimize the need or the seriousness of the situations which exist. It does hesitate to inaugurate a program of this character with Federal funds to provide direct medical attention to the civilian population with physicians paid by the Federal Government. The committee has the opinion that out of the coöperative efforts of the Federal Government, the medical associations, the State departments of health, and the communities themselves, there will and should come a concerted and spontaneous effort to provide this need. Most of it is in war industry areas and it is inconceivable that such communities working with the industries, the affected population, and State and local authority, cannot inaugurate and maintain an adequate public-spirited program, financially sound, to serve this need. *If the affected areas cannot and will not solve their local needs it may be necessary for the Federal Government in the interest of the general public health to step in, but until then the committee feels that Federal funds should be withheld under the contemplated procedure."* (Italics ours.)

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MICHIGAN
STATE BOARD OF REGISTRATION
IN MEDICINE

202-3-4 Hollister Building — Lansing, Michigan.

October 29, 1943.

TO:

Officers and Executive Committee of the Federation of State Medical Boards of the United States,
The Council on Medical Education and Hospitals of the American Medical Association,
The Michigan State Medical Society,
The Wayne County Medical Society,
All State Boards of Medical Examiners of the United States,
All Members of the Michigan State Board of Registration in Medicine,
All Hospitals Approved for Internship Training in Michigan.

At the October session of the Michigan State Board of Registration in Medicine held in Lansing, Michigan, on Tuesday, October 12, 1943, the following questions were considered by the Board, as submitted by the Executive Committee of the Federation of State Medical Boards of the United States by request of the Manpower Commission through the Federal Board of Procurement and Assignment of Doctors of Medicine, Dentists, and Veterinarians.

1. Will your Board approve a decrease in hospital internship from twelve to nine months for the duration of the war?

2. Will your Board accept subsequent service in the armed forces for those physicians who leave their internships at the end of nine months at such time as they may apply for license in your State?

3. Will your Board accept a continued training in civilian hospitals from the ninth to twelfth month for those physicians who are physically disqualified, and, therefore, do not enter the armed forces?

The decision of the Board as to each of the aforesaid questions was as follows:

1. The Board does not approve a decrease in hospital internship from twelve to nine months for the duration of the war.

2. The Board will accept subsequent service in the armed forces for those physicians who leave their internships at the end of nine months at such time as they may apply for a license in Michigan provided they complete the remaining three months of internship in an Army or Naval Hospital approved for internship training by this Board.

3. The Board will accept a continued internship in civilian hospitals from the ninth to twelfth month for those physicians who are physically disqualified, and, therefore, do not enter the armed forces.

With reference to Question 1, it was the consensus of the Members of the Board that the reduction of internship would deprive the student of an important and indispensable portion of his practical training limiting his work in certain fields or possibly eliminating any experience in certain fields of general practice. That the casualty cases are of a character which call for more than brief practical training and background, was the further observation of the Board. The Board also recognized that the shortage of interns at the hospitals necessitating voluntary assumption of all-day or all-night general hospital duty by the now overworked local doctors, removes the few remaining doctors from necessary work in civilian practice during periods so devoted to such voluntary assignments. The Board expressed its apprehension that hoarding of interns is occurring in a certain few large hospitals in industrial areas, and many out-state hospitals approved for internship training have only one or no interns.

With reference to Question 2, it was determined that

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the subsequent service to be accepted by the Board should not consist of routine services such as physical examinations or first-aid work in war plants, or routine physical examinations in military induction centers. This would not be internship training, but would in fact be the practice of medicine. This would create a discrimination to those so assigned as against those who are required to devote twelve months in internship training before entering the practice of medicine. The law would frown on such a double standard of admission as discriminating. The standard must be uniform as to time and content.

The Board further wishes to point out that the situation could be easily met by transferring interns, after nine months of training, to approved Army or Naval Hospitals, thus enabling the student to leave the civilian hospital after nine months of internship training, as is now advised by the Office of Procurement and Assignment. Such training in a military hospital could be accepted as part of the required 12 months' training service. In fact, such proposal for the acceptance of twelve months' training, or any part thereof, in an approved military hospital as part of the required internship training was approved at the June, 1942, session of the Board.

Considering Question 3, the answer to this question requires no comment as the full twelve months' rotating internship training would be completed.

Commenting generally on the foregoing, the Board expressed itself as being opposed to meeting our present emergency needs by lowering the quality of practical internship training, and in reaching its decision the Board respectfully calls attention to the fact that in England neither the medical school curriculum has been accelerated, nor the internship period has been shortened

Summarizing the foregoing, the Office of Procurement and Assignment requests the shortening of internship from twelve to nine months, so that these men can enter military medical service. This can be done by the plan of assigning the interns to military hospitals after nine months' internship. Therefore, there is no necessity from a military standpoint of requesting licensure before the full twelve months' period.

Yours very truly,

J. E. McIntyre, M.D., *Secretary*
Michigan State Board of Registration in Medicine

The American Board of Ophthalmology is now located at Post Office Box 1940, Portland 2, Maine. The officers for 1944 include John Green, M.D., Chairman; Frederick C. Cordes, M.D., Vice Chairman; S. Judd Beach, M.D., Secretary Treasurer, and Theodore L. Terry, M.D., Assistant Secretary. The 1944 examinations will be held in New York on June 3 and 4 and in Chicago on October 5, 6, 7.

* * *

Military Roster in February Number.—Due to their great length, the Proceedings of the 1943 House of Delegates will be printed in two parts, the first portion in the December issue and the concluding part in the January number. The Roster of Michigan's Military Members, originally scheduled for the January number, will be published in the February MSMS Journal.

* * *

The great trouble is that there are too many people looking for some one to do something for them. The solution of most of our troubles is to be found in everyone doing something for himself.

Say you saw it in the Journal of the Michigan State Medical Society

COUNTY AND PERSONAL ACTIVITIES

"New situations bring new duties."—Oliver Wendell Holmes.

* * *

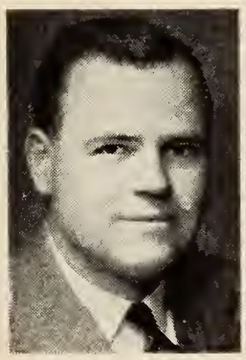
The Michigan State Board of Registration in Medicine announced on October 22, 1943, the revocation of the licenses of Joseph Austin Conley, M.D., of Ionia, Michigan; Toras Sarkisian, M.D., of Canon City, Colorado; Perry Eugene White, M.D., of Clio, Michigan, and LeRoy Wellstead, M.D., of Ottumwa, Iowa.

* * *

Beware strangers seeking narcotic prescriptions. The Commissioner of Narcotics, Washington, D. C., warns Doctors of Medicine to be on guard against drug addicts, and states: "Many of the drug addicts today tell us that they are obtaining narcotics to satisfy their craving by going to various physicians and simulating some serious physical ailment."

* * *

Charles F. McKhann, M.D., who for several years has been on the faculty of the University of Michigan, has resigned from that institution to accept a position as Assistant to the President of Parke, Davis and Company. Dr. McKhann will devote his time entirely to the scientific activities of the company. He assumed his new duties October 15.



At the University, Dr. McKhann has held the positions of Professor of Pediatrics and Communicable Diseases in the Medical School, and Professor of Maternal and Child Health in the School of Public Health. He has also acted as Consultant to the Secretary of War in the Control of Epidemic Diseases.

Dr. McKhann has had an interesting and exceptional background of experience. The summer of 1941, previous to coming to the University of Michigan, he acted as Consultant to the Board of Health, Territory of Hawaii. From 1936 to 1940 he held the position of Associate Professor of Pediatrics and Communicable Diseases at Harvard Medical School and Harvard School of Public Health. Before that he spent a year as Visiting Professor of Pediatrics and Communicable Diseases at Peiping Union Medical College, Peiping, China.

Since 1930 he has conducted and directed research on communicable diseases, immunology, renal diseases, nutritional diseases, and on certain phases of toxicology. He developed and introduced immune globulin and has contributed to the development of several other products.

Resolution Re Michigan Medical Service

The 1943 House of Delegates of the Michigan State Medical Society referred to The Council the Brasie Resolution concerning Michigan Medical Service. The Council appointed a Special Committee, composed of E. F. Sladek, M.D., Chairman., O. O. Beck, M.D., P. A. Riley, M.D., E. R. Witwer, M.D., to study the problem and report its findings at the earliest possible moment The Special Committee is investigating the matter presented in the Resolution, making some important contacts, and will endeavor to make a progress report after the first of the year.

* * *

Would compulsory health insurance improve the health of the American Public?

No. In most countries where compulsory social insurance is now in effect, the health of the people has declined. Doctors have been hampered by red tape, patients have demanded attention for trivial ills, and have been more interested in getting certificates of ill health which would qualify them for cash sick benefits than in acting upon advice which would make them well. Doctors are imposed upon, and with low incomes and more patients than they can handle, have become discouraged and inefficient, greatly lowering the general standard of medical practice. By comparison the health of the American people is the best in the world.—*Insurance Economics Society of America.*

The Status of Osteopathic Physicians in the Medical Corps of the U. S. Navy and the U. S. Naval Reserve

Numerous letters regarding the appointments of osteopaths in the Medical Corps of the Navy have been addressed to the President and to Senators and Representatives in Congress.

The provisions in the Supplemental Appropriations for the National Defense, passed by the 77th and 78th Congress, provide for the pay of commissioned medical officers who are graduates of reputable schools of osteopathy. These provisions, however, do not modify the requirements for appointment in the Medical Corps of the Navy.

The requirements for appointment in the Medical Corps of the Navy include "applicant must be a graduate of an approved school of medicine, and have served one year of intern training in a hospital accredited for intern training." Doctors of Osteopathy are not graduates of approved schools of medicine and do not hold the degree of Doctor of Medicine.

In order that personnel of the Navy, Marine Corps and Coast Guard may be afforded medical attention by physicians who are trained in accordance with the best accepted standards, it is considered to be to the best interests of the Naval Service to accept for appointment in the Medical Corps of the Navy only grad-

uate Doctors of Medicine from approved medical schools.

In adhering to the existing requirements for appointment in the Medical Corps, the Navy is maintaining the high standards of professional qualifications for medical officers now required by other branches of the armed services.

Ross T. McIntire,
Rear Admiral (MC)
Surgeon General, U. S. Navy.

* * *

Beaumont Memorial Assured

Restoration of the historic Early House on Mackinac Island as a memorial to Dr. William Beaumont was assured this week when ownership of the property passed from private hands to the Mackinac Island State Park Commission.

It was in the Early House, then forming part of the retail store of John Jacob Astor's American Fur Company, that Alexis St. Martin, a young French-Canadian voyageur, was wounded accidentally in the abdomen with a shotgun, June 6, 1822. This enabled Dr. Beaumont, then post surgeon at old Fort Mackinac, to make his famous experiments and observations "through a stomach hole," which, in the words of a bronze tablet erected at Fort Mackinac years ago by the Upper Peninsula and Michigan State Medical Societies, "brought fame to himself and honour to American medicine." Dr. Beaumont cleared up much of the mystery that previously had existed regarding the process of digestion.

Purchase and restoration of the Early House long has been a project of both the Mackinac Island State Park Commission and the Michigan State Medical Society. An option on the property was obtained some weeks ago by W. F. Doyle, chairman of the Commission, but for a time it appeared that the option would have to lapse because funds were lacking with which to complete the deal. Then A. W. Lescohier, M.D., president of Parke, Davis & Company, of Detroit, advised Doyle that his board of directors had voted sufficient funds not only to purchase the Early House but also to restore it to its 1822 condition. Completion of the purchase was accomplished in November.

Before work on the house is begun, the State Park Commission will seek the advice of the Michigan State Medical Society committee which has been working on the project. Chairman of the Beaumont Memorial Committee is Frederick A. Coller, M.D. of Ann Arbor. Records of the American Fur Company and the War Department will be checked carefully to the end that the restored building may be exactly as it was in 1822 when Mackinac Island was in its heyday as metropolis of the American fur trade. The National Park Survey, with headquarters in Washington, which undertakes to correlate and assist with historic restorations throughout the country will also be consulted.

The Early House project is one of the major steps in the Island restoration program instituted in 1940 by the Mackinac Island State Park Commission and the City of Mackinac Island. Restored this year were the offices and warehouse of the American Fur Company and the former residence of Robert Stuart, resident manager for John Jacob Astor from 1819 to 1835 and later one of Michigan's first state treasurers.

The residence of Dr. Beaumont was in the east end of the officers' quarters building, a whitewashed stone structure within the Fort Mackinac enclosure. With the other Fort buildings and most of the land of Mackinac Island it was turned over to the State following the abandonment of Fort Mackinac as a military post in 1895.

Politics Uppermost: The answer to the question of why we cannot have a reduced system of Social Security lies in the fact that a broad plan, such as is advocated by the National Resources Planning Board, has for its ultimate aim not the satisfaction of genuine social needs of a small, underprivileged, handicapped, and disabled part of our population, but the perpetuation of a political interest which wants to identify itself with the personal life of every citizen and every family throughout the nation.

Even without benefit of the theory of the confiscation of wealth, it is easy to see that, if the Government wants to raise from five to ten billion dollars a year, the easiest and most prompt, if not the wisest, way to raise it is where money is most plentiful. There is no richer field for the Government to crop than that of private enterprise, private savings, and private investment activity.

Freedom of Enterprise: In contradiction to Frances Perkins, there is only one lesson we are able to draw from all these facts. Boiled down, it goes like this: A Broad Social Security System on a compulsory basis and under Federal control ties up the financial resources of the nation so effectively that there is small room and little attraction for private enterprise.—*Insurance Economics Society of America.*

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A HUNDRED YEARS OF MEDICINE. By C. D. Haagensen, M.D., Surgeon, Columbia University School of Medicine, and Wyndham E. B. Lloyd, M.D. England. New York: Sheridan House, 1943. Price $3.75.

Modern medical science as compared to even a hundred years ago is a marvel of accomplishment. This book gives as a background a picture of the times and sanitary conditions of antiquity, and of the eighteenth century, calling attention to the fact that most of the things described were the worst that could be found, but trying to show the exact picture as compared to the present. The origins of medicine and its development through Hippocrates, Aristotle, Galen and Avicenna are discussed, and then the period of centuries when medicine lay dormant until awakened by Paracelsus, and the advance into exact knowledge during the past few centuries are hurriedly discussed. Interesting chapters are devoted to sanitary advances, hospital development, knowledge of infectious diseases, the improved education of the medical profession, and their rising above the level of the barber, the quack, and shyster. It discusses the growth of the surgical specialty from the rough and ready opening of abscesses and the quick amputations done before anesthesia to the exact and skillful surgery of today with all the advantages of time and opportunity given by our knowledge of anesthesia. The story of tuberculosis, pernicious anemia, and the wasting diseases is entertainingly told. Radium and X-ray are described, with their untold benefits. This book is primarily written for the layman, but has a world of useful and entertaining knowledge for the student of medicine that is otherwise available, but is here condensed and gathered in a compact form. The latest problem of medical distribution is discussed, including prepayment insurance and compulsory health insurance. The volume is well worth careful study.

AN INTRODUCTION TO MEDICAL MYCOLOGY. By George M. Lewis, M.D., Member of the American Dermatological Association, Inc.; Fellow of the American College of Physicians, of the American Medical Association; Associate Attending Physician (Dermatology), The New York Hospital; Assistant Professor of Clinical Medicine (Dermatology), Cornell University Medical School, etc., and Mary E. Hopper, M.S., Research Fellow in Medicine, Cornell University Medical School. Chicago: The Year Book Publishers, Inc., 1943. Price $6.50.

Fungus disease has been found to be an important factor in causing loss of effectiveness of the armed forces, especially in tropical climes. This consideration caused the authors to determine on a second edition of their work during the war period. Much new material is at hand since the publication of the first edition. A chapter is devoted to the history of fungus disease, one to a classification of fungi, immunity and sensitization. The various forms of superficial mycoses and deep mycoses are described, and best of all well illustrated. Local treatment, roentgen therapy, vaccine therapy and other measures are all given due consideration. A good bibliography accompanies each subject. Tests and methods of diagnosis are described and illustrated. The book is very well put together, and printed in large letters. It is a very handy and readily usable book.

ORAL DIAGNOSIS. By Kurt H. Thoma, D.M.D., Professor of Oral Surgery and Brackett Professor of Oral Pathology, Harvard University; Oral Surgeon and Chief of Dental Service, Massachusetts General Hospital; Oral Surgeon, Brooks Hospital; Dental Surgeon, Dental Department, Consultant in Oral Surgery, Tumor Department, Boston Dispensary and Joseph H. Pratt Diagnostic Hospital; Consulting Oral Surgeon, New England Baptist Hospital; and Consulting Oral Surgeon, Beth Israel Hospital. Second Edition, Revised. 495 pages with 666 illustrations, 63 in colors. Philadelphia and London: W. B. Saunders Company, 1943. Price $6.75.

This text is especially a presentation from the dental standpoint of all conditions affecting the oral cavity. It does not stop there for it takes up and discusses the somatic diseases and conditions involved in or affecting oral disease. Malformations of the mouth, and the accompanying malformations of other parts illustrate the general plan. Roentgen examination is minutely given, with illustrations. General oral and dental conditions, and especially teeth and mucosa disease are well illustrated. Tumors are presented with pictures, and discussion of diagnosis. Focal conditions and bodily diseases affecting the oral cavity get full attention. This book is a most valuable one to all dentists and all others called upon to diagnose and treat oral diseases.

GASTRO-ENTEROLOGY (in three volumes). By Henry L. Bockus, M.D., Professor of Gastro-enterology, University of Pennsylvania Graduate School of Medicine. Volume I. The Esophagus and Stomach. Fully illustrated, including many colors. Philadelphia and London: W. B. Saunders Company, 1943. Price, three volumes, $35.00.

The Author states that the experience of the past three decades, and the increase of medical knowledge have practically removed the field of gastro-enterology from the broad field of internal medicine, and has made it a specialty of its own. To be proficient in this field requires special attention and training. Long experience in teaching this field has developed the necessity of a textbook on the subject. He appreciates that no one man could produce such a book in a busy lifetime, but a group of highly trained men working together, and recording their observations, could. He has followed that plan and drawn upon the Gastro-intestinal Clinic of the Graduate Hospital of the University of Pennsylvania which is divided into sections presided over by trained specialists who have acquired highly specialized knowledge in their various departments. In preparing the text the purpose has been to present a discussion of every phase of the subject. However only those data have been included which in the author's experience and judgment have been of definite value or interest. Whatever subject is under discussion, there is an analysis and outline, etiology, diagnosis, complications, therapy, and prognosis. Each heading has a thorough discussion followed by a very complete bibliography.

The handling of the subject is expert, the presenta-

tion is of the best workmanship, both from the printer's standpoint, and the teacher's as well. It is a most valuable addition to any library.

GERIATRIC MEDICINE. Diagnosis and Management of Diseases of the Aging, and in the Aged. Edited by Edward J. Stieglitz, M.S., M.D., F.A.C.P., Consultant in Gerontology, National Institute of Health; Visiting Physician, Baltimore City Hospitals; Attending Physician, Washington Home for Incurables, Washington, D. C. Illustrated. Philadelphia and London: W. B. Saunders Company, 1943. Price $10.00.

Geriatrics is fast becoming one of the most important fields in the practice of medicine. It will not be long before one-third of the whole population of the United States will be over fifty years of age. The number of children is decreasing and the number of older persons is constantly increasing until it is estimated there will be twice as many over sixty-five as there are now. That means diseases of the aging, and ordinary diseases as they affect the elderly person. The general practitioner will have much more of his work among people who are reacting differently to the disease and the minor complaints from which they suffer. It is too vast a subject for any one man; this book is an editor's book containing contributions from fifty-four well-known authors. Principles of mental changes in the aged are discussed, as also are the response to medication and special reaction to parasitic disease. The changes of the eye and ear in aging, and, changing of the mouth and gums are only a few well-treated problems. The book is complete in so far as it can be in 887 pages. It is well written, good type, well printed and a very valuable treatise on a subject that is growing in value to every one of our medical practitioners, whether in general practice or special.

Secretaries Conference, January 30.—The Annual County Secretaries Conference, sponsored by the Michigan State Medical Society, will be held at the Book-Cadillac Hotel, Detroit, on Sunday, January 30, 1944 (*not* January 23), 10:00 a.m. to 4:30 p.m. An excellent program has been developed. Every County Society secretary is urged to attend this vital conference, and to bring the president of his Society.

* * *

Medical students enrolled in the Army Specialized Training Program totaled 14,644, according to Victor Johnson, M.D., Chicago, Secretary of AMA Council on Medical Education and Hospitals. A total of 4,989 Apprentice Seamen were enrolled as medical students during the same period of June, 1943, and approximately the same figures apply as of today.

* * *

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No fluoroscopic unit should be used unless the doctor in charge has convinced himself that the conditions under which it is operated are reasonably safe. A continuous vigilence is necessary, and it is not enough to know that the conditions were satisfactory at one time in the past.—Natl. Tuberculosis Assn., November, 1943.

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